THETIMES Higher Education SUPPLEMENT

MP fights to defeat teacher training plans

by Indith Judd

A Labour MP is fighting to secure
the defent in the House of Common next week of the Government's proposals for teacher
training

training.

Mr Dennis Cenavan, MP for West Stirliog, has tabled a proyer against the statutory instrument which would give the secretary of state for Scotland power to discantinue teacher training at some Scatrish colleges and which is due to take

effect a week today.

The Government's proposals to end teacher realning in two Scottish colleges and tu merge two with two other collages have already been defeated in the Scuttish Grand Coansister and Inc.

Mr Canavan seid this week; "I am hopeful that now there has been ouch strong opposition the prayer will be successful and the proposals will be referred to a standing enmilitie of the Ilouse and dehated.

"I am quite convinced of the widespread apposition to the instru-

ment. I have nor met anyone out-side the Scottish Education Department and ministers who favour the

The tabling of the prayer does not mean that there will definitely be a debate though this has sametimes happened in the past.

If a debate is to take place, it will hove to be coon. The Secretory of State for Scatload, Mr Bruce at the leginning of May and Mr Canovaa feels it is no coincided can be that the instrument is due to come into effect ar the same time. There has been speculation, have ever, that die announcement will he delayed to allow for revisions to be onde.

If there are no significant changes in the proposals, Mr Millan will face opposition from another quarter. Mr Alex Fletcher, MP for Edinburgh North and Shulow Scottlsh spokesman an education, will put down a monthor censuring, probably Mr Millon, end possibly the whole Conventions.

By Suc Reitl

A twa-tier system of Phils with different standards for hame and are susted. A twa-tier system of Phils with different standards for hame and are standards for hame and treations, Making her claim or a seeminar last week examining pre-sesshoual English courses for averseus students in higher education Miss Price suid than exalencies standards for hame and are standards for hame and are standards for hame and developing at Eritish naiversities, Miss plane! Price, a lecturor at Newcastle University's language centre, hos object.

Making her claim of Phils with haiversities, Miss plane! Price, a lecturor at Newcastle University's language centre, hos object.

Making her claim of Phils within haive

will put down a mintion censuring, probably Mr Millon, end possibly

dent that dils would have the sup-port of all Conserveives as well as some Liberal and Lahour mem-

proposals."

In the adjournment dehate Conservatives, eight Lilherals and some Lubour MPs all voted against the Guvernment.

Both Mr Canovan in Mr Pietcher wont oil 10 colleges of education in Scotlend retained, with reduced numbers, Mr Conavan said the colleges could diversify like oome in England had done.

More want to do in-service **B.Ed degrees—DES report**

cation, It concentrates especially on Edgo Hill College, Ormskirk end Clwyd locol education nuthority and

Its institute.

It picks out the increasing demand for pert-tion degrees as no of the most important features of the present scene, though none of the tutors consuited would like to see all higher awards gained by port-time study.

However, oue tutor who teaches a diplome on a full and part-time basis oald. "The full-time studints develop furtbor bur lose much of

develop further bur lose much of that development within a month or two of losving us. The port-timn students develop lese over ell, but when they change they etay changed."

changed."

The report sees validation by externel bodies of school-focussed work, through award bearing courses as having particularly exciting possibilities where a group of teachers in one school work tagether. This has been much used in Germany and the United Stetes.

One scheme in Clywd involves 20 reachers in e comprehenoive school

A growing number of teachers wast to do pert-time in-service BEd degrees, says o Department of Education and Science report published this week.

The report follows visits last year by her majesty's inspectors to colleges and deperiments of education. It concentrates especially on the supervision of the inspectors in the inspectors the chief of the inspectors the inspect

Report on Education Nn 88, In-Service Training: The Rule of Col-leges and Departments is evailable free from the DES.

• The Government has occepted the view that part of the rate support grant may hove to be carmorked for

in-service training.

In o speech to the National Association of Schnolmasters/Union of Women Teachers in Torquay recently, Mro Shirley Williams, the Secretary of State for Education, said: "I have reluctantly come to the conclusion that we may beve to bave some elemont of specific grant in the education budget."

She said in-service training weo essential, yat tao many authorities speat money on other things, Even with the introduction of the induction year teacher training was sail mastisfactory for a lifetime's job.

The Government is committed to a massive expansion of in-service troining and the initial teacher training figure for 1980 included 10,000 for in-service.

Environmental scientists meet

by Clive Cookson

science correspondent

Ooa hundred end lifty experts on environmentel education from 20 to the conlerence described particular environmentel courses at a conference organized by the Institution of Environmental

Institution of Environmental Sciences (in association with Farnborough College of Tochnology).

The tone of the meeting was inevitably against treditional science courses based on one subject and in favour of a broad multi-disciplinary approach.

But Dr John Potter, principal of faraborough College and homorary secretary of the institution of Environmental Sciences, sold the technical further aducation sector should be the priority area for the establishment of environmental education in Britoin.

Degree courses have prolifered

But Dr John Potter, principal of Faraborough College and honorary borough College of Tochnology).

The tone of the meeting was inveltably against treditional science courses based on one emblect and in favour of a broad multi-disciplinary epproach.

Professor Philip Janee of Toronto University typified this inter-disciplinary attitude both by his job title (professor of civil engineering and microbiology) end by his prediction town the "pristine disciplinary" and prediction town the "pristine disciplinary" as havens of eminimate virill gradually diminish until they fulfil their real function, and it is a proposed.

But Dr John Potter, principal of Faraborough College and honorary the Institution of Entitudion in Britoin.

Degree courses have prolifereted (there are 70 undergraduate onvironmental education in Britoin.

Degree courses have prolifereted (there are 70 undergraduate onvironmental education in Britoin.

Entitudion of Entitudion of Entitudion of Entitudion in Britoin.

The number of schoolillare in

Britain has two-tier PhD standard, lecturer alleges

Miss Price, who was speaking at a sombour organized by the SEL-MOUS (Special English Language Maturiols for Ovorsous University Students) group at Hally Rayde College, Manchester University, outlined the results of a survey into the state of precessional English language courses in Britoin fur overseas students.

sens students, The survey, believed to be the first of its kind, involved 19 centres,

A twa-tier system of PhDs with different standards for hame and agersens students is developing at British naiversities, MIss Janet Price, a lecturor at Newcastle University's language centre, hos olleged.

Making her claim of a sentinar last week examining pre-sessional English courses for aversens students in higher education Miss Price suid that academic stuffwere giving some forcion students. spansors or government agencies, including the British Council and the Ministry of Oversees Dayelupments, soul Mise Price.

Only one university, Edinburgh, finances its presessional English course for averseas students. Two after institutions, and in the public sector and the secund an independent English study centre, are supported by the British Council and a fourth is funded by the ODM. The remaining 15, included in the survey, are all self-financing.

The provision of presessional English charses had expantled, particularly during the past 18 months. Thore had been new courses sturted and old courses had been lengthened, Miso Price told the seminur.

There was a move towards provid-

There was a move towards providing courses which included subject apecialisms but this had clearly raised problems because many institutions did not know exactly what students intended to study before they arrived to take part in the presessional programme.

The SELMOUS group, established The survey, believed to be the first of its kind, involved 19 centres, including universities, colleges and independent institutions, where presessional courses ore known to take place. It showed that 60 por cent of the public elector establishments stago precessional courses purely for

Coombe Lodge under survey

Two local education officers are oxumining the casts and benefits of Coombu Ludge, the further ethicu-than stuff rullego in Sumerset, partly ta unswer criticism of it from uent muthurities.

luent muthurities.

However, Mr A. II. Yntes, the college's director, sull this week that he was meanteurned at the investigation. "We are familed by the Scattish and Nurthern Irish antharhies as well as thus in Englond and Wales und they have all made laquiries at same that are nother. I could direct the inspectors to a number of chief education officers to get a fully satisfactory occount of our work."

The Council of Lacsi Education Authorities' investigation fullows the increasing cost of Commbe Ladge's work. Techoleally the college's governurs ere responsible for its llabilities which, if the CLEA etopped footing the bill, would omount to over £200,000.

A recent approach by the governance of the contraction of the country of

An exhibition celebrating the 100th annivereary of Hermonn Hesse's birth opened of the National Baok Leegue, Laudon, yesterday for three weeks. The exhibition includes original pages from the monuecripis of Hesse's major works, the euthor's corrected proof coples, first editions, essaye, holograpb-lilustrolod poems, and his wetercolours. A recent approach by the gover-nore of the college to the Deport-ment of Education to regularize its pasition was fruitless.

Officers of the CLEA expect to receive the ropart an Coombo Lodge's future shortly, before they make recommendations for its hudgot for 1978-9.

Scandinavian SSRC signs German accord

The Social Science Research Counerts subcommittae of the UGC in considering rationalization of cll und the West Germon Forscattered departments."
Concern et the rapid decline in the number of schoolchildren etudying modern lunguagas woo expressad in a Haedmustere Cunference working porty repart published this wask. schungsgemeinschoft thio wock signed an accord worth £20,000 year to exchange social scientists between the two countries.

At e ohort ceremony in the SSRC hesdquarters in London Professor Dr Renate Meyntz, of Cologne Univarsity and choirmen of the Forschungsgeneinschoft committee for empirical sacial science research, said the countries were sufficiently similar to ellow comparative study, but sufficiently different to make such work scientifically interesting.

The five-year occord aimo to foster knowledge and interest ebaut the sacial sciences, to encourage understanding and good rolationo between social scientist, and to exchange ideos, skills and methods of research."

Maths taught May 6, 1977. No. 289 teachers'

Many mathematict and a strutement enter higher the after being taught by schools miqualified in their ubjar. Association of Polyteconic in whenced this week.

In evidence to the arts whi tion sulf-committee of the the Committee exponditure com inquiry into the ausschaal leavors the association "Amung the opplicant for recruits, in polytechnic during the benefited from some obligated content, can qualified teaching and in the content of the content

Most polytechnic min involved to some extent in ial" work, the APT with cose of mothematics there lack of ochool teachers with fidence, ability ood lowest subject.

subject.
Criticiving o lack of manong teachers actido to rounn, Dr Touy Polaton, the secretary, said that many at helleveil their pupils sing avaid infinantion work. "In attailents ening into higher tinn far a pen-pushing in infarantion suggests that people see o child who is into an inclustriol environment of the source sort of fellure."

In evidence the APT side In evidence the APT adde

them steer students lowards in wealth-producing octivities.

"Furthermore the roll was a considered in wealth-producing octivities.

"Furthermore the roll was a considered in wealth-producing octivities.

"Furthermore the roll was to be considered in ment law often criscope and continued in the roll way workers and crimerst hard octive producing a opening the new NUR training search and less well rewarded in mid less well rewarded in little of the roll was in his factor of sight was no hell earlier this schoul. In foroign languages, the workledgo of the comploined in larging to do that shundl have been covered where the mechanics of the issguige.

Mathomatics staff in polyted the roll was been used to the inclusives of the issguige.

Many polytechnics found data the recitanties of the issguige.

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o member of the Royal Committee.

on Environmental Pollulo, a servo on the UGC from just the end of 1979.

NEXT WEEK Bristol University's School vanced Urban Studies ion Brodiey on trade will cation

The ocademic job markel Teacher reorganization Angila and the cast m Will o British Brookings #

THE TIMES Higher Education SUPPLEMENT

Universities warn of BEd approval school threat to first-year standards The ability of first yeor university etudents to cope with work at that level had declined because of schoolteechere thirst for innavation,

e House of Commons select com-mittee was told thie week.

and arts subcommittee on the attainment of school leavers that the proliferation of syllebuses and the control of examinations by schoolteuchers olane threatened academic standards: more end more time in the first year at university had to be spent on remedial work.

The Associution of University
Teachers spuke of the tendency la
recent years in "relax" stondards
in A-level mathemetics. Professor
David King, AUT president, predicted a fourdt yeer of university
would be needed to ensure present
illus degree standards.
In giving the CVCP cyldence to

lu giving the CVCP evidence to the committee, which is chaired by Miss Jonet Frokes, MP, Dr Harry Plti, vice-chancellor of Recoiling Uni-

Pit, vice-chancellor of Reoling Unirorsity, described o crisis in mathematics reaching caused by a shortage of well-qualified teachars who
aften over not up to the compilrated curriculum development plans
that had spring up in the past
decade. The pace of lumovation in
the school curriculum had been
much too rapid, he said.

The CVCP said: "The curriculum
has whiened causiderably with increasing rapidusis on upitional
subjects and those which 20
years ago were not regarded
as the concern of secundary
education; new styles of teaching
and popil assessment have been
adapted; within higher education
anony new degree courses end combinations of subjects heve been
introduced with consequent implications far the praparation of sixth
formers intending to arcoced to
degree level wark."

What blio meent for the universties, Dr Hurry Kay, vice-chancellor of Event University said was

stries, Dr Hurry Kay, vice-chancel-lor of Exeter University, said, was that professors of mathematics were devoting more of the university degree course to covering basic matter not tought In some schools.
The universities were concerned with the spread of so-called Made

3 examinations in the schools. These, set and marked by classroom teachers alone, dld not guarentes reliability. Dr Clifford Butjer, vice-chancellor of Loughborough
University, said some clement uf
external assessment was needed to
sustain standards.

mittee was told this week.

Tha Committee of Vice-Chencellors and Principals tald the expenditure committee's aducation and arts subcommittee on the attainment of school leavers that the proliferation of syllebuses and the proliferation of sylleb

matical operations.

The association was also canceracd about standards in modern languages. Dr Margaret Majumdar, of Rayal Hollaway Callege, spoke of the need to language the context of of Ruyai Hollaway Callege, spoke of the need to langrave the contect of schoolchildren with native French speekers and the upparent increase in the numbers of A-level condi-dates who had never visited the country whose language they studied.

The total number of school leavere gaining A levels continues to increese, according to figures published this week by the Department of Education and Science. However, the number of chase successful at A level remains at 15 certains and 15 certains and

The decilne in numbers specializ-

The decline in numbers specializing in science continues, though there has been an increase in passes in individual subjects such es chemistry, blology onal mathematics. There has been a drap of a third in Latin passes in the past five years. French ragisters a decline in popularity in the sixth forms.

The stotistice show that grammar schools, direct grent and public ochools provide o dispraportionate number of entrants to clogree courses. A third of direct grant and public schnol loovers and a quarter of grammer leovers go to degree courses compared with one twenty-fifth af comprehensive leavers. Degree courses in 1974-75 took one in 14 of all school leavers.

Entries for A levels from further education calleges have doubled for men end tripled for wanten in the paot decede.

Stotistics of Education Vol 2 1975 Schuol leavers, CSE end GCE. IIMSO £4.25.

Universities biemed, page 2

the money, which is to be sub-at Lancaster police was told that he was told that he was a sub-assumption of the was a sub-assumption of the money, which is to be sub-trected from their great hefore the first lastalment is paid out in August. But discovery of the error has caused great consternetion in the University Grants Committee and ividespread confusion emong finence officero over what their ideals are the control of the contr final allocation for next year will

clon of contra-

iclel Scerets Act end

out his connexion with

a Cempbell, a freelanco log chargoo uoder tha whom he hod corrosapart of his research.

of evolution, deploy-asier of human control

Investigation Into tha political police.

ght received the support epartment, which is cun-lout the three to academic posed by the incident. He

anch to be unprecedented.

were raturned after he

back.

finance officoro over what their final allocation for next year will he.

The talc of the missing £9m io one of Whitehell's left hand not knowing what its right is doing. At the ond of March the universities recent from the figures previously notified to bursere and finance offices.

University finence officere and £9m for additional paymets to be made for steff National Insurence. What the UGC and the Department of Education end Science did not know was that universities, each clierities, were exempt from thie supplementary poyment.

This became appered the seme week as the grent was announced in the universities of inflation bigher than was announced.

The ugC la now recalculating the grants payable to universities, lopping off a fraction of eround 1.2 Salford University was forbidden on Wednesday from holding a meating on Zioulsm and Judelsm in the students' union on the grounds that a meeting tha day before on Zioulsm bad been provocative.

The ban was imposed by the students' union deeplta an assurance given in an affidevit lest weak that the UIS could hold any meeting the universities, was quick to take back a little extre, bur refused point blank to provide the wherewithal to cope with tetes of inflation bigher than was involved in the universities' grant.

This became appered the seme week as the grent was announced.

supplementary poyment.
This became apperent the seme week as the grent was anuouoced

The Treesury demsaded £9m from the DES. The DES then told the UGC, which was in the middle of eending letters to the universities with figures for their individuel 1977-78 grants. All this caused, in the worde of one official, "a degree of psychological stress."

gives doomed college hope

The Government is being urged to avertura plans to close the Sldney Webb school of education at the Polytechnic of Central London, following the eleventh-hour veildation of its new BEd degree.

The school, which under Department of Educetian and Science proposals, will take in its last students, has raised hopes for survival. exist from 1980, has been told by the Council for National Acedemic, Awards that its "Innovatory" degree programme specifically designed for mature students has been approved. een approved.

designed for mature students has been approved.

Until now the school, the Sidney Webh Callege of Education until its merger with the polytechnic two years ago, has not offered a BEd. The CNAA's decision to validate a degree, which on the face of it will have analy one intake af sindents, has raised hopes for survival.

A DES spokesman emphasized this week that the school'a closure wos no more than a Government "proposal". Following the CNAA decision the school issued a statement declaring: "This approval of the school's work should clearly indicate to Mrs Williams, Secretary of Stete for Education, that ehe must reverse her proposels concerning our future. This CNAA amouncement can be seen as vindication of the school's cluims to the education of London's children." The new degree will ollow stu-

the education of London's children,"
The new degree will ollow students eged 22 or more to enter the course with altarnative quolifications to the normal two A level provise. It will loy a special emphasis on clossroom techniques end pay purtkenler rogerd to the "crucial oreas of natise and English".

Work on the degree has bacuunder way for three years. The CNAA is understood to have given the programme particularly close ecturiny becouse of its innovatory qualities.

But while validation has renewed

qualities.

But while validation has renewed hope for the college's future the CNAA does not ect in concert with the Department of Education and Science. It is priourily concerned with ecademic etandardo, not the future of institutous,

Under its preeent proposale, the DES will ellow the Sidney Webb School en inteke of up to 56 this October. The school is plenning to ohelvo its certificate programmes in favour of the new degree from the beginning of the next academic

E9m Whitehall error

A total of f9m is to be cot from the which Mr. Healey gave dealth of the planned method as reversal of the planned method

Scultish collegee, leeder page 16

Jewish students² meeting banned

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British Student Association

A new residential college for adults is to be set up in Yukshiru next year if the Department of Education and Science can provide adequate

The college, to be established an this site of Wentivurih Castle College of Education, Barnsley, due far closure next summer under the Government's plans for teacher troining to the college of the coll ernment's plans for teachor troining cutbacks, has the full support of Sheffield, Barnsley, Donesster and Rotherham education authorities.

They have been discussing the scheme for four years and following top-level talks with Mr Oakes, oilnister of state overseaing higher education, announced last weak that the callege will take 50 students

A snokesman for Sheffield oducation authority said this week that the recurrent cost of maintaining it with 50 students would be £140,000 s yeur. With 120 it would reach £260,000.

The suthorifics linned the DES would provide 50 per cent of the recurrent costs. The spokesman added: "If they fail is provide more rhan a taken sum we will have to cut back on the maiber sf

But the DES is expected to support the college. The four "guaranter" authorities have been asked by Mr Ookes to reexamine their costings and detailed discussions

with the Government are now likely to be finalized by August.
"One and two year courses will be offered as well as ten-week Yorkshire and Humberside and ather parts of the region. The DES

far men and winner who are making or wish to make a personal contribution to public life, in central or incal guvernment, the trades

A steering committee responsible for planning the catlege and including representatives of Bradford, Calderdale, Derbyshire, Humberside, Kirklees, Leeds and Notting

side, Kirklees, Leeds and Nottinghumshire education authorities,
universities ut the region, the
Workers' Educational Association
and Sheffield Polytechnic, has been
established.
Fallowing last week's discussions,
Councillar Peter Hortun, tha chairman, said: "In view of what the
minister has suid we shall examine
our costings very enrefully and loak
into any sourcea of funds which
might help us to get the callage
opened.

opened.

"I would lying to conclude our discussions satisfacturily with the ministry by mid-summer. In that case the callege will be ready to receive students in September next

Police investigate confidential poly papers' theft

Psilce ore investigating the their of confidential napers from a safe in the Polytechnic of Nurth Londons administration block occupied until last weekend by andents pro-

until last reckend by anticats protesting over tuitiun fee increases.
Discovery of the safe-breaking
was mode by polytechnic staft after
the students had been ordered to
end their two-month sit in by a
ligh Court judge. The secupiers
threatened to defy the court order
but left the building without prolest on Saturday when police
arrived.

academic year would be put in in jeopardy.

A spokesman for the PNL students' union declared this week that no approaches from tho police or the polytechnic authorities hed been made regarding the alleged thick. But the Metropolitan Police is being investigated by the CID."

Students at North East London Polytechnic last week staged a pire-edgy occupation of ottaching block within the callege's West.

The cost to orembers who receive the magazine and have use of facilities or the University Centre, is being investigated by the CID."

Students at North East London Polytechnic last week staged a process of the control of sixth form colleges would not give the magazine and have use of facilities or the University Centre, is being investigated by the CID."

Students at North East London Polytechnic last week staged a college has been referven in our it is being investigated by the CID."

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Students at North East London Polytechnic last week staged a college has been referved in the magazine and have used of facilities or the University Centre, Grants Place in Mill Lane, is East year of £25 for 10 years (255 for 10 years (255 for 10 years (255 for 20 years (255 for 10 years (255 for 10 years (255 for 20 years (255 for 10 years (255 for 20 years (255 for 20

Cambridge launches international

old-boys' society

Membership will be spen ts all former members, of whom there are about 100,000 around the world. Through a mogozine, Cambridge, and meetings they will be kept informed about work at the university

and what other members are dsing.
The idea is that such a society would be better able to keep mem-

A Cambridge Society has been launched by the university to keep former members in touch. The Doko of Edinburgh, chancellar af the university, has agreed to be

too-specialized curriculum

HE requirements blamed for

Higher education is to blame for a highly specialized school curriculum which is detrimental to the warld of work, Mr Mux Morris, headmaster of Willesden High

Schasl, said this week. School, said this week.

He told a conference at the Dighy
Stuart College of the Rochampian
Institute of Higher Education that
tha two A-level university entry
requirement had overwhelmingly
determined what was taught in
schools. "It is not the job of
schools to provide specialists for
higher education. The best service
the schools can offer for the world
of work is a broad education, rather

of work is a broad education, rather than pruduco prematurs specialists."

on Saturday

polytechnic spokeman said
 week that the misaling papers
 ionged to Mr Terenee Miller, the
 illege's director.

The occupation was also staged in
 protest over liner Londno Educa tion Authority plans to reduce over sees student numbers in the London
 polytechnics it funds. The odminis tration block of the college has
 been occupied in ahlfts throughout
 the two-month action, including the
 Easter vacation.

A court possession order was

A court possession order was

The soclety might also oct as o
 mouthplece for tha university
 which, it says, is periodically
 which, it says, is periodically
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schsul. A broad general education could be offered, su mails were flitted to a world where they would probably be chonging their cureers

several times. Mr Stan Brondbridge, general secretary-elect of the National Associa-tion of Teachers in Further and ligher Education, sold that a

lligher Education, said that a change was also needed in the training of teachers.

Not ovely did they have in he shown how to teach, but have to department at met the department at the department at met the department at met the department at the department at the department at met th devise currients suited in puricular schools and environments. It the Government's old to attract more pupils into further reducation at 16 was successful, teachers would be observed.

be chicating people previously outside their orbit.

They would have to think about problems of troilo informed education, of curriculo for pupils in multi-racid nareas, and of the implications for curriculo of the cipul opportunities legislation. He unged more colleges to accept unpils without the standard two A-level requirement, os did North East Lundon Polytechnic for its Diplants in Higher Education course.

The universities' point of view

The universities' point of view ives provided by Prafessur W. D. Wall, of the doportment of educational psychology and child development of the Landon University institute of Education, who attucked the dishotomy instructs a consider the dishotomy instructs. the dichotomy between specialist and general studies. The latter

system.

The proper place for sixth farms could decipher, outline implications and for pupils under 18 was it and give reasons for their opinious.

Commonwealth jobs shrink

News in brid Majority Oxford vote gives go-ahead OUhonoraryden to new mixed college regulations for Yehudi Menn

Yebudi Menuhin, the viding president of the Trinity Cole, Music, and Joan Littlewood theatre director, are to be assumed the street director, are to be assumed the street director of A majority vate by members of the Oxford University Congregation has lifted the last absorbe to colleges blied the last obstacle to colleges blied the last obstacle to colleges going ouresidential within two years if they rish.

Results in a pustal vate by the Congregation—the body representing anst of the university's senior members—en the unestion of coresidence showed 741 to 355 in favour all the interestity ceasing to with-bid consent to relevant amounttheatre director, are to be as hunorary ductorates by the thirersity this year. Educated that the to receive honorary grees are Dr Edwin Kenty officer of the Council for the Academie Awards, Professor, muo Mackenzie, director di schoul of education, Susserficity, and Sir Beo Bowen by furmer peronsnen secretary. of the university ceasing to reth-hold consent to relevant amount-ments of college statutes.

The vote was called after a congregation neceting in March paned the same resolution by a majority of only three. Opponents of coresidence, who include at less one wamen's college head,

Ruskin to

offer fine

arts degree

Cheap travel services were an-nounced this week by the newly formed British Student Associa-

The association, now six months old and 6,000 strong, two formed as an alternative to the National Union of Students, which has 800,000 members. Unlike the NUS, the BSA ballots individual members to elect its executive officers and to decide an equivalent in the state of the st

to decide su constitutional issues.

Russian chair filled

Birmingham University has not red upon Dr Moshe lesses at centre for Russian and Englinems studies the title of point of Soviet history and point in the Soviet history and point in the Soviet his no officer in the Soviet his worker and journalist him in worker and journalist him in New York. His book builter Struggle has oppeared ning guages.

Oxford University will offer a degree caurse in fine art from Orubler 1978, the university congregation agreed last week. It will be run at the Ruskin School of Druwling and Five Art, replacing the certificate in fine art offered by EEC funds UK resent

The Eurspesn Commiss announced financial sided £259,000 for ten British as projecta. Two are at the history of Central London: 10 contribution is the develope solar heating as mass manifold, and £4,476 for microser of the lung.

Three university prokat heating further research as thermal energy at Oxford [28], subtraction of the lung.

solur energy at Leed (III) physical chemisty at No. (15,420).

London, took over from R. M'Eweii us President of Institution of Mechanical

nt the Technological Unite

Ludz, Poland).

Ilonorory degrees of doist laws were owneded to Mr Willows (director of Coats Polst). Wele Group and Clydesdele Dr Czeslaw Lesniak (under secretary of the Polish organisation Polonia) and Mailhew Linning (general marriagher and production, of Petroleunt Davelapment). The new travel services are nonil-sble to all students whether BSA members or nat. The association's leaders expect to capitalize on the collapse of the NUS's own travel service last year. They point out that they are able to offer flights to destinations throughout the world and that their services our European courts. Emopean routes ore some 9 ner cent lower than the "Bonanzo" flights any being promoted by the MUS. A nyn-week summer holiday in

The Royal Society has seeded new foreign members; new foreign members; have been professor of physical at Tokyo University; is seed to professor of mathematics of the professor of theoretical physics of theoretical winds professor of theoretical winds professor of theoretical winds of Marburg University Ksnif, for many); and Ephraim Ksnif, for many; and Ephraim

announces cheap travel plan refugee call Milan, for example, casts E55 through BSA and E60.12 through

> Sixty thousand copies of the tre rel kruchure harr gune unt this week to student union presidents unit secontary school headmasters. Since membership of the BSA, for full-time students over 18 costs only 50p, the association expects unch of its income to come from its travel activities. Two-thirds of the profits will be used to extend BSA membership services.

However, advacates of mixed col-

If, as seems likely, this proposal

is rejected by congregation, indi-vidual colleges can praceed with alterations in their statutes embling them to admit both sexes, probably to 1979.

BSA membership services.

The BSA already offers insurance and a range of advisory services on legal, arcummodathen and religious problems. It plans to offer a free retall disrount scheme (the NUS disrount cord rosts £2) and plans to see not a jub placement service for students and sixth formurs, financed from employers' fees.

Mr. Tony Report, an insurance broker and former London School of Economics students who helped In a referendum in the beginning a smell insjurity that the assistion should be a sarvice organization, concentrating on cummercial, cultural and sparting activities, tather than a comparigning, pathical saion. The first president is 28-year-old Michael Pourl, a graduate law studem at St Edmund House,

hroker and former Landon School of Recommics students who helped found the BSA, said at o press conference this week: "The MIS highers capitalism for graduate uncombiguent. We are providing a positive service to halp students capte with it, instead of shouting dogmetic upithers."

The BSA was fulfilling its promise to set up "efficient services, rounguitively priced, run by stu-

rouspesitively priced, run by stu-dents for students", added Mr

Report, page 11 | saurces.

Government supports

The Government has indicated has support for a nathunal policy covering the education and resettlement of refugees called for in a widerunging report produced by the World University Service.

Although talks at ministerial level are still continuing the Government is expected at muke an ontonnerment in the next two wreks on its attitude to human rights and the WUS proposals, which argue for an intoke of 2,000 refugra families a year laitfully, are then likely to receive a farannable response.

The report, Biliculion for Refugees, calls for a givernment reception centre and a central fund for schularships for refugers. It critisizes the way Brinda deals with the reception, resettlement and education of refugees in the absence of any thrit government siralegy.

There was no government palicy and ad hac arrangements were made by ministers and officials as "hest they could be the cirmustances." Further ethicultum was the sector in which least acovision was onade. Facilities for refugees in higher ethicultum had been "extremely confusing and luconsistent" with a wide range of funds from a wide range of not always available

Science lobby

The voice of science i, not being heard in Faverament circles, according to Mrs Williams, sectionary of

However, advacates of mixed colleges have not yet wan the entire battle, however. The next congregation meeting on May 17 could receive a proposal than the process of going coresidential goes shortly and that a number of colleges are allowed to stuy single ser. A group of academics led by Mr Jahn Cacas, of Merion College, argues that Oxford would be domaged by "undue baste".

The change is heigh made because a number of colleges electing processors are allowed to stuy single ser. A group of Merion College, argues that Oxford would be domaged by "undue baste". Ing to wirk withints, sectioner, in state for education and science.

"Wherea, in fields like the arts I am conscious continually of a labby pressing for greater expenditure, in science alas there is no labby", she told the Association of British Science Writers this week. a number of colleges electing proc-tors already have mixed fellowships and could therefore appoint a worway to the office. Thus it has become illogical for the women's calleges to be excluded from the Mrs Williams binted that basic research might fure hetter to the scrawble for public family if more scientists, were prepared to exert diemselves to influence publicians

She made it clear that they would

do better in argue the long-term importance of basic research for the ecanamic and Industrial Inture of

the country, than to nieke the cul-tural appeal that "the pursuit of

knowledge is on activity necessary to human aspirations and central tu-the human condition.".

and civil servants.

More power for Oxford students?

electoral evele.

into closer contact with the uni-versity. It will be order the general After the first year students will bound of the faculties, like other be able to concentrate on pointing departments, instand of a dirent of prianmaking or, in a lesser extent, grant department. sculpture, it differs from the certifi-

Students taking the degree course will qualify for a manulatory grant instead of a discretionory grant as of present.

They will need a minimum of two of the university, and be admitted by both that college and Ruskin. They will have a minimum of two A levels (which the school has in only case requested from certificate students in recent years), take the may case requested from certificate it had been overcrowded, students in recent years), take the Corrent students will

university enreace examination the certificate course. No students and a practical lar the school, wre to be taken this October to printing, printmaking, sculpture, for the degree course.

The horer could be blamed partly on the universities for their old fushimed reverence for scholarship and pure study for its nwn sake, which was now unique to the United Kingdoor, Mrs Williams said. In schools too teachers tended to
"save their brightest papils from
the drendful fate of going inuited drendful fate of going inuited stry". The result was that in general the less able students found their way into applied science and

rechnulagy,
Mrs Williams said that although science and engineering applications have been rising since 1974-75, there were still 22,000 empty places on indversity causes this year, and 7,000 in pulytechnics and further education.

Fire safety appeal. launched

Rillaburgh University has homehed a £250,000 appeal to exposud its department of fire sufery engineering. The about it to addid research biliarmorles and add two lecturers to the present suff of three.

The department has offered an MSc in lire safety engineering since 1974 and will provide a major option for the undergraduate civil engineering course from the conding

engineering course from the coming year. It also runs numerous short

year. It also runs numerous short courses for industry.

The opposed is being mode or marily to industry ond commerce, hacked hy a message from the Duka of Edinburgh, the university's choncellor, who points out that the department "sets out to tackle the whole problem of accidental fires with the objective analytical approach of a scientific discipline".

The university aims to "provide

appraach of a scientific discipline".

The university aims to "provide a streum of qualified fire safety engineers to help carry out those essential tasks. The amount that is being easked for is £250,000 over styny years. Compared with an expected loss over a similar period of 7,000 has and £7,000m, it is a saidly sim."

Tories 'will too weak, says recognize Mrs Williams Buckingha Buckingham'

The licences affered by Univer-ity Cullege, Buckingham, are likely to gain full recognition as the equialent of a traditional degree if the Conservative Party wins power, Keith Hampson, vice-chiriman of the party's parlinmentary educa

Following a refusal by Mr Oakes, nigister of state overseeing higher motister of state overseeing inguer education, to meet Professar Max heloff, principal of the "independent university", the Causervurive Party has strongly criticized the Government's attitude towards the college and its qualifications.

Dy Hampson claimed this reek duit the Social Science Research Council had refused to finonce licentiates of the college going on to postgraduate work despite the fact that the universities of Lan-don, Blemingham, Manchester and Glasgow had agreed to consider such applications.

The two aspects of British science that most worry Mrs Williams are the problem of spatialing sufficient innovative success to keep the next The Civil Service Commission and he Ministry of Defence had been unwilling to hold discussions with generation of young scientists in this country, and the discrepancy between Britain's superb international reputation for pure research and os consistent failure to apply the knowledge in industry. the university and had made no rul-ng abun licences of the college, whose first students will graduate his Decomber.

Dr Hampson soid: "I om disturbed at the lack of willingness in the Clvil Service Commission to alsouss this matter fully and it seems to me that they are acting on the advice of the Department of Education and Science,"

The added: "The Government ought to make its position clear and publicly state if it favours the college and his qualifications or if

college and his qualifications or i It is trying to make his life as diffi

The Law Saclety, the Canacit fur Legal Education, the Iosiline of Chartered Accountants and the Institute of Chartered Secretaries and Administrators had each given the Buckingham licence recognition

"We will may be considering what assistance we would be able in offer as a Conservalive government lowerst giving full and foir recognition in the rollege's qualifications", Hr Hampson said.

Postgraduate professional troin ing for engineers is one of the key areas to be studied by o new Coo-

arens to be studied by a new Conservative "tank farce" an engineering, education and ladustry.

The tosh force, which comprises
top readenties, trade unlonists, and
businessmen, is to have its first
meeting this mouth and is expected
to report by Novomber. It is chaired
by Prafessor John Thornton, heed
of the department of mechanical
engineering at Newcastle University,
mid contains representatives of and contains representatives several major compoules includin Ford, Shell, GKN and GEC. Other topics to be examined h

education to present industrial needs, the relevance of schools further and higher education to in dustry, and the incentives needed to moke industrial englueering more

to moke industrial engineering more attractive to young people.

The task force is ourt of a wider campulgu by the Tories to foster links between their policy-mokers and those in research. Dr Kelth Ilamoson, MP for Ripon, has been appainted party lideau officer, with the job of visiting notversities and polyrechules and foliage academics (of sphatover political persuasion) prepared to offer their expertise.

Nursing unit appoints head

Chelsen College has appointed Mrs Caroline Cox, head of the sociology department or the Polytechnic of North Landon, as the first director

David Walker on academies' pay

capitalism Arnold McMillin on Boris Paster-

Inn Scott-Kilvert reviews a new

Reorganization of teacher train-

Association The Open University in America

DES to press for increase in students living at home

A Department of Education and Science working party will complete its nine-month investigation of plete its nine-month investigation of student catering and residence this month. Its report, likely to be issued as a builtoin to local authorities for proportion of home-based students.

Members of the CLEA were students living at home.

Much of its activities have been statistical and methodological. Many months have been spent arguing by ith the local authorities about the actual size of the deficit most polytechnics and college a miner on the question of residence the summer on the question of residence the summer of inquiring its most polytechnics and college a definition of residents living at home.

Miss F. M. Cowell, senior catering the second the actual size of the deficit most polytechnics and college a definitiation of residence and catering charges to miner on the question of residence for the college administrators and local authorities about the catering accounts.

On general policy there its little

dent of Iarael and professor the Workman level of Science. The society has appeared to the University of Bri Lanka and Information Country.

The University of Bri Lanka and Professor Anne maushon and is expected to anticle in decidence of Countries. The University of Bri Lanka and Information Country.

The University of Bri Lanka and Professor Includes a Queen Anne maushon and is expected to diplomatic cultural and Information Country.

The Unive

St Paul's College, Newbold Revel.

NEXT WEEK

Clive Cooksan starts e three-part serles un medical education Edward Norman reappraises

study of Cavafy

ing : Scotland





Sex is afoot

lith-century pouluine.

The university will pay the costs of the flysheets concerning matters before Congregation, but the two student bodies will have to pay for those on general university mottors. The vice-chancellor would have the discretion ro allow more flysheets each term. Ho would also be able to withhold rousem to the circulation of any flysheet which be thought might be defamotory or otherwise illegal.

Mr Andrew Ellion, president of the students' union, welcomed the students' union of any flysheet which be defaulted to the unable.

The new scale of fees for students is as follows (with the ald charges in brackets): home under spragatures [500 [£182]; nowerses in Congregation".

Oxford students might be giren a greater chance of influencing university policy in future.

Hebdotoadal Conneil, the university is to set aside (150,000 in its 1977-78 hudget to meet cases of hardship arising from the government ship arising from the government limposed fee increases. This follows discussions between the university union and the Graduate Representative Council the right to circulate three Hysheets a term in the afficial newspaper, The University Gazette.

The students would also be able to support flysheers circulated by members of Congregotion.

The university has taken its cue from the University Grants Cambro support flysheers circulated by members of Congregotion.

The university has taken its cue from the University Grants Cambro support flysheers circulated by members of Congregotion.

Bishop hits at UK education

higher, further and adult are hope-lessly inadequate as a means of pre-paring people to cope with contem-porary life, he cloimed. The Dicks Parallel Manager of pulitical, change is so great that a school eduporary lile, he cloimed.

The Right Rev John Tinsley, who

spent 20 years as a university don hefore becoming Bishop at Bristol last year, is regarded as o leading outhority on education in the sympathies and a fragmentation of Church, In his monthly diocesan let-knowledge just at a time when coter he warns thar "we run a serious operation, tolerance and understand-risk of becoming one of the worst ing ace once necessary than ever.

A west country Auglican hishop educated countries in Europe, We called last week for the abolition need to have a vision of what the French call a permanent or lifs-clueation." Compartments such as long education. The growth all

cathon was no longer adequate to equip human liches for adult life, The bishop said that specializa-

soft-centred criticism of capitalism was made this week by Hr Edward Norman o Combridge historien unit entiributor to the Black Propers on ethication.

Dr Norman, a specialism of this is is it the first victim of this."

Dr Norman, a specialism in the history of the Anglican charch, a mechanism for the creative properties of conference of Employers of Carnduotes, occused teachers of endiestly chipping eway at the more lessly chipping eway at the first viction of the creative problem. The chorac had a more lessly to the fir

A coll to ecademics, teachers and lightened sociel odvance, mony teacher leaders of public debate to chers present a picture of society reject vapid social agonizing and in need of radical change. Capital soft-centred criticism of capitalism is the first victim of this."

Prices

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ATOL 152 BC

Pollution studies get more money

by Clive Cookson srience correspondent

The fire research councils are devoting a growing slice of their stude hudget to pullution research. They spent £5.25m investigating pollution in 1975-76, 5 per cent more in real terms than in 1974-75.

A report by the litter-Research Council Committee on Pollution Research says that £1.26m of this went on university mul polytechnic grants. When the University Grants Committee's routribution to the work under the dual support system is included, total public expenditure on university pollution research comes to £2m. comes to £2m.

Most of the additional funds ore going to smoll new projects in universities and institutes, notably on organic wastes, noise and particu-

The three biggest spenders or publicion research are the Medical Research Cunneil (£1.93m), Natural Environment Research Council (£1.73m) and the Agriculturol Re-search Council (£0.99m). Most of this ly work commissioned by Government deportments.

The Science Research Council spent £570,000 and the Social Science Research Council £28,000 (analaly at the SSRC Centre for Socia-Legal Studies at Wolfson Cullege, Oxford).

The report emphasizes the importance of investiguting low-level pollution with subtle effects that become appurent only in the lung effects are thus not rendily assessed und often require enreful and long term research which will be both difficult and expensive. Scientists must therefore be prepared to develop methods and in the light of available data in produce, probability assessatents of long-term environmental hazards."



Pollution : requires long und expensive rescorch

is probably £100m e year, yet only £36,000 is spent on climatalogical research by NERC, the research

Tutol expenditure on rlinatological research group and gight cal research is along flux per year, mainty by the Meteorphogical Office, a NERC working purty reports.

"This bears little relation to the significance of climate both as a national resource and as a luxuri shadowed by other components."

computers unless companie gress is made in climatolog, report says. NERC should hele setting up a new central dimm

available date the produce, product bility assessments of long-term environmental lazards".

The community will not derive partners have only one climble Britoin's notional weather service lorecasting from smellites and high very hord to establish".

Dr Norman defends capitalism Polys suffer from research council 'meanness'

The tesearch councils have ogen hear accused of holding back research in polytechnics because of their meanness with grants.

The chorge comes this time from Dr. Also Grawshaw, chalronau of Sunderland Polytechnic research report that Sunderland is trying to raise the level of external funding well allowed the control sustain the quality of their first trying to raise the level of external funding well allowed the control sustain the quality of their first trying to raise the level of external funding well allowed the control sustain the quality of their first trying to raise the level of external funding well allowed the control sustain the quality of their first trying to raise the level of external funding well allowed the control with the committee, who points out that the polytechnics receive unity 2.1 per cent of Science Research Council greats, compored with universities greats, compored with universities 96.1 per cent—and the SRC pro-

job end a studeot's preporetion for teaching should not end in his

Lotd Jomes added that the role

eerly 20s.

growth of knowledge and bitellectual refreshment, Lord James of Rusholme, told Brighton Polytechole's degree ceremony recently. He said that the first object in teacher irmining was to ensure that the student was shrough the rigous of a legree course, in others smusting broader and less specialized was often more appropriates. "Secondly he should probably and in general be educeted and trained not in isolation but with those who aim to follow quita difference by their of it should be discouraged. The AUT suggests that the student of it should be cut and willing states of interest when interesting accommodation, and to go it should be cut and willing states of interest when interest when interest when interest and the proceeds or understand the proceeds or understand

trained not in isolation but with dicoment but to evoid panic. The put projects of one ar two AUT's priority is saving jobs. lerent careers." To be quolified did not mean that one could do the

The Bullatur says: "At nutional appointments and renewable fort level the AUT cannot furesce o and five-year contracts."

British chemist to of polytechnics was central to the great debete's exemination of how head neutron team

education could be made more rale. Or John White, a physical chemist vant to chenging social needs and how the quality of teachers could be improved.

By the complete of Queen's the country of the coun

ba improved.

"They ere committed to the pursuit and dissemination of knowledge that has a clear bearing on accision with former collegas of education with former collegas of education they are essuming responsibility for the education eod traioing of e lerga numbor of our future teachers."

In Grecoble, Europc's prestigious nectours.

Dr Wbite, who is a fellow of St John's Collega, has been on secundant from Oxford University's Physicel Chamistry Laboratory since 1975 es an associate director of the institute. He takes over as director from the Germon Nobel prize winner Professor R. L. Mössbauer.

They ere committed to the pursuit and dissemination of knowledge incurron research contre.

Dr Wbite, who is a fellow of St John's Collega, has been on secundant from Oxford University's Physicel Chamistry Laboratory since 1975 es an associate director of the institute. He takes over as director from the Germon Nobel prize winner Professor R. L. Mössbauer.

Vick becomes new Warwick chairman

time here."

Alr Makepeace and his staff on the non-profit making Paraham Educational Trust hope in attract graduates because "those who have opted for an academic course rantoften work very fruinfully afterwards in a craft field. This choice should always be open to them, and there is a \$1,000 scholarship for an academic course for the work very fruinfully afterwards in a craft field. This choice should always be open to them, and there is a \$1,000 scholarship for an applicant of outstanding promise."

diven at which a "new wave "hand, They still diven to perform led me there in a spirit of saturation and prohably reference that my readers stock up the rorrect kill well in advance.

Scouring the proked hall of students from our colleges all over applicant of outstanding promise". In the Caoning of the Academic Freedom had been around in 1215 in would have been kept busy at the University of Paris where processors were furbidden to wear pookines. To work up the right degree of indignation about this common know that noulnines degree of indignation about this you must know that poultaines were the most pornographic slope erer norn according to William Rossi, at American Icet authority, whose honk The Sex Life of the Fact and Shoe (£4.75 Routellge and Kegen Pauli is now on the bookstands.

"I the wish people would task more ahour my kill." complained Professor R. S. Scorer, of Imperial College, Loudon, whose work, The Cfeter Menus (1895) has just heen published, But when a professor of theoretical nechanics from South Kensington ourl vidum any trace of a Scorrish occent turns up of e lounching party in a kill, then questions ore bound to be asked.

Questions like "Are you scottish?" for instonce. Professor Scorre hesitates and smiles winningly before onswering that relational professor in the surandmother had once in "I do wish people would talk more quartered style of habilying that along my hook and less obout my

Apparently, these professors used to stuff the tips of diely poulnines with word or mass which mode the the critice.

The kilt was all part of the admirable fresh uir, real bread, odnorities-are-beautiful philosophy which he expountly in his book. A fossil fuel Jereatish from wey bock he warns of the complete collapse of just alumn everything, foretelling certain disaster in terms that make one lie sheepless in one's bunk.

The the past? he writes. "civileffect even less pleosing und leil a Cardinal Curson to condemn surh academics of an ourrage aguinst good manners, the church and God. These scenes from ocademic life are part of the nuther's basic premise that what we are oil really interested in and attracted to prepremise that what ive ore oil really interested in and attrocted to are feet. Other crogenous addedd are just distractions, like Christmos rreo lights taking your mind off the presents.

The poulaide, he argues; is a fine example of the podocrotic artist (shoemasker) attacking the repressive Western tubog on feet. He goes on to list, a Leavis-like great tradition of feet writers; Thomas Hardy "showed a deep and consistent interest in his heralities feet"; Goetho was keen an paniolloguistics (loot longuage and diateling); while, of course, Bondelnire, of whom and would believe anything, could be kept quiet for hours with a pair of old Dr Schulls.

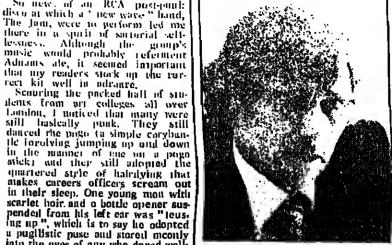
Much be stated to the real possibility of retrogression in anything and many of the attributes of right anything all-additions have risen and many of the attributes of right anything and many of the attributes of right anything all-additions have risen and many of the attributes of right anything anyt

old Dr Schulls. Much of the hook's organieut is of any sort and would pick a fight with an ylk if northing better affered based upon the observation that we usert ourselves into a shore quasi-sexually, but this is equally tree of the property in the observation of the content o

the latest ideal clights of the pottor's sheel while allow in the delights of the pottor's in the opening of Parnhem House in men in wood, many of whom, it is kine about a war in the family.

Sinc about while university graduores. Pett, biniself a proctising furniture premises, thuk over this Tudor within a busy workshop on the country house set in 14 ocrost to give madent a year. The first of thase countries the wood croft skills to eight theyear countries starts in Many art school eraftsmen are the luccessful hecause they do not business. Our students will elm to business, our students will elm to the spaning out huild up ellents and their course took from the very tility tourners so they can be laded to course took from the very tility tourners so they can be laded to course work from the very tility tourners so they can be laded to course one between the course one believed to the course of the

Broadcasting and the HE duopoly So new, of an RCA post-punt disco at which a 'new wave' hand,



also unopened.

It is percepilre about individuols, os whom referring to Lord Hill's chairmanship of the fillC ("... politicians may have wondered whether they had appointed on admirul who hubitually turned a bilind eye when the Admirolty made a signal"] and when noting the Loquoclous Haw Wheldon's "remarkable brevity". With its appeals to Horaco and Hume rather than Machine and the loturists, the report has clearly benefited from Nuclean articulate cholrnonship.

You should see the .

bloKes!

College

late choirmonship.

It gisn has significant things in offer to those of us engaged in pust-school education. He support for the lifes of integrating educational breakful. broodeasting with the more general output shaws the committee to be firmly against the idea of ercuing an educational ghesto. However, it found little herd evidence on which to base judgment of the effective ness of educational broadcasting.

Echoes of the debate on tencher education are easy to illscern. The compiles are comments that hered.

This report days however, the continued of science Research Council great, compared with universities urged to sharped the same and the SRC previous the same and the same and

Phills the ingiversities had a virtuo Polls the miversties lad a virtual monopuly of higher education. This was explicitly challenged after 1965 by the binary policy establishing the polytechnics and essentially a duopoly of provision in higher education. Now a third wave of development is under way with the omergence of the colleges of higher education and the intempt to provide a growing network of educational apportunity through a new emphasis open access and transfer for an increasing number of month in the mercasing number

transfer for an increasing number of people in the community. What is currently lacking is a clear set of principles for the abandonneau of the higher education dinopoly and its replacement by a more relevant and total service.

However, the Annan Committee could well have been writing directly about education when it says that "good broadcasting depends on talent—the talents of the men and women who make the programmes and for which there is on substitute. But it also depends in part on the way broaddepends in part on the way broad-casing is organized; and those who point out that the output of individuals is to some extent con-titioned by the switching of the industry in which they work, are "Wo do not believe that the pre-

which was derised to meet the present structure of broadcosting, which was derised to meet the needs of the 1960s, will be adequate to meet the demands of the 1980s. In our view the present structure could not ever olapt exough to meet the lucronse in the demands for new agrices which society was each aervices which society may auke in thu next 15 years." Merely re-place the word "broodcosting" with the word "cducation" and it could

well serve as an introduction to a new report on higher education.

The four regulates which the committee savanees could equally committee savanees could equally he applied to education: they are flexibility, tilversity, editorial independence and accountability. Flexibility implies a copacity to respond and to adapt to social change and new access, some of which will be in conflict with coch other. University conflict with eoch other. University senotes on the one hand or the Council for National Academic Awards on the other should unt necessorily be the only anthorities in higher education, Duopolles, however benignly controlled, tend in eyltahly to lead to righlity. Diversity is also an absolute requirement hecause, as Aman argues, "Our society's culture is now multi-taclal and pluralist: that is to soy, people adhere to alliferent views of the unture and purpose of life ond oxpect their own view to be expressed nect their own view to be expressed in sumo form or other." Thus, e rongo and variety of institutions are necessary to enable such diversity to flourists.

literal minded stop to ask: "Kate Kennedy? Who is she?" The procession byochure has obviously decided that honesty is the lest policy: "Wo know very litelo about life in the 1950s. The new vision of life in the 1950s. The new vision



abroad.

In the equivalent week in 1973 there were 67 (almost double) jubs in Eritish universities, 82 (from times us money) jobs in the pulytechnics and 17 in the colleges of education: a tutal of 166. There were fur lewer jobs from abroad—about 28.

Taking the week before, the pattern is repeated. This year, on April 8, there were roughly 7h jobs from abraud (37 in 1973), 16 in Brhish universities (69 in 1973), 16 in the pulstechnics (80 in 1973) and 12 in colleges and instincts of

to In the pulstechnics (80 in 1973) and 13 in colleges and institutes of higher education (17 in 1973). That is a total of 45 British jobs this year compared with 166 in 1973.

The picture is reinforced by some statistics from the Association of University Tearliers, Jased

does prontailan creute o vocoticy, although this has very much dowed down anywoy becouse of

Now **OU**

the score

knows

entatics studied will enable gradentatics studied will enable graduates to teach in secondary schools.

It is also intended to prepere for Education, has made several
those who wish to teach in higher appeals for more trained maths oud further education where there is also e shortege of qualified stuff, An equal amount of time will be entering higher education had been spent nit markemarics and educa- ponrly taught.

hy Judith Judd

A degree caursa to equip graduates to meet the scrious shortage of qualified methematics teachers in echools is to be introduced this October at the University of Monchester Institute of Science and Technology.

The course, which will leed to a Bechelor of Science degrees in

Technology.

The course, which will leed to a Bachelor of Science degres in methoderea.

The course, which will leed to a Bachelor of Science degres in methoderea; and education, hos been planned jointly by the methoderea; trained mathe teachers. Her Mejesty's Inspectorate said in appraisal of Soma Problems in Key Subjects published in January, 1977: "The greatest problem in mathematics cantinues to be the graduates, perhaps 60 per ceut, will enter clacking although the course will nar limit their choice of mathematics cantinues to be the shortage of qualified moderantics teachers was recently calculated as 1,859 it expects the course's graduates will easily find employment.

"Tho DES teecher shartaga survey shaws that mathematics is still

teachers and the Association of Polytechnic Teachers said recently

Poly offers part-time engineering

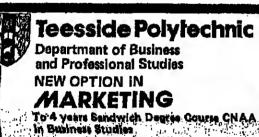
offer a new part-time degree course in engineering. Students will devote one day and one evening a week to the caurse, so it will enoble industrial personnel to wark to-wards e professional qualification sacrificing their present

specialization in civil, electrical and electronic, manufacturing and mechanical engineering. The normal entry qualification will be o good Higher National Certilicate in one of a range of engineering nr applied science subjects.

University of Strathelyde Department of Electrical Engineering MSc COURSE IN ELECTRICAL POWER ENGINEERING

Peri-limo aludenta from industry attend the university for one afternoon and avening per week for 36 weeks in each year and undertake a dealgn/research preject normally based at their place of employment. Excellent facilities are also available for research leading to the award of the degree of MSs or PhO.

Electronic Engineering Heriot-Watt University



Datails from :-GRAHAM ROBINSON Principal Lecturer Teasside Polytechnic, Middlesbrough, Cleveland TS1 3BA.

UNIVERSITY OF DUNDEE

DEPARTMENT OF COMMUNITY AND OCCUPATIONAL MEDICINE

MASTER OF PUBLIC HEALTH

(Health Education Option) A special programme of core and elective studios has been developed within the above multidisciplinary course for those preparing for a defect in cessarch or administration in the ited of health aducation. Applications are invited from suitably qualified graduates with a special interest or experience in health sducation, for the course bagtuning in Ootober 1978, which may be pursued juli-lime (1 year), or part-time (2 years).

Further datalls may be obtained from:
The Pastgraduate Ozah, Pasiay of Medicine and Danilety,
University of Dundee, Ninetvella Hospital and Medical School,
Dundee DOZ 1UD.

New chance to compare **East and West**

Students will have the opportunity of comparing the economic and political systeme of Western and Eastern Europe, including Russia, within an Interdisciplinery degree coursa in European studies to be lounched at Wolverhampton Polytechnic this outumn.

The four-year caurse, recently approved by the Council for National Academic Awards, has been designed specifically to evoid limiting the study of Europa to those countries within the European Economic Cammunity. It will olso examine Eurape's relationship with the United States of America and developing constries.

fied modernatics teachers was recently calculated as 1,859 it expects the course's graduates will easily find employment.

The course is madelled on the joint honours degree in the mathing is at present worse than union is at present worse than 1972 which merked the end of a denorment and the mathing is a provided of incorporament."

It will combine within the European context the study of three moin disciplines chosen from the social sciences, economics, history and politics and innequages. Students will spend the third year of the course abroad and have the tha course abroad and have the opportunity of studying French, German, Spanish or Russlan at a variety of starting levels.

The emphasis will be on contemporary Europe, the interection of the nations of Europe and the problems which confrom European society. The polytechnic maintains that in this respect the study of

and inacgrated range of studies in the social sciences and to give stusocial sciences and to givo stu dents o comprehensive perspectiva on the Europe in which they will live and work ", o spukesman said this week.

onours caurse in tontamparary dropens studies affered by the Polytechnic of North Landon are to be made from this October. The three-year course, now in its first year, will become a four-year praramme ollowing students in spend

The course, which has a multi-disciplinary companient, is intended to give a sound education besed on an analysis of the development, structure and problems of cootenporary Europe.

13 languages in Newcastle BA

The course combines e general theoretical study of linguistics with the precticel study of two foreign languages, of which one must be modern, ond one new to the etudent.

Amoog the theoretical aptions ere sociolinguletics, psychology of language, philnsaphy of language try and in bronchee of teleconnumunity. and computationel linguistics.

Town planning attitude is vocational and academic The school of Town Planning at far the usual jabs in planning the school of the school of the planning at administration. Towards this the approval from the Council for can choose in their final year to be a severel specialist and the school of severel specialist and the school of severel specialist and severel specialists.

nperate o four-year degree cause, starting in October 1977.

The course will be both professional and academic in content. It seeke to avoid the image of plangovernment officers.

A vocational approach is cambined with the recognition that staff and students are likely to have a variety of philosophics obout the meaning and purpose of planning. Such on attitude ulsa reflects the present, rother fluid conditions in some absolute total. Conditions in sown planning itself.

When they have completed the Leeds course, students will be equipped for postgraduate and other advanced studies, os well os finel term.

outions, including conservation medics. This will be in addition a proparing their own specialized de scriptland

hus been rejected. Instead there will be o system where project work—an essential, but very time consuming espect of plonning education—is all concentrated in the third term of ench year.

The object of this arrangement terme (after which they she enged The deeper understanding of plan

Computing for businessmen

Busineesmen can broaden their ness studies involving data protes knowledge of companers and statisties in management through a new nost-experience degree at the Cran-field Institute of Technology, Bed-

The degree, run by Crantichi school of management, is an MSc in business systems. It is a year's full-time course, aimed pria foreign language and the year spent abroad will play a significant role in enabling the students to see Europe and his problems from o "non-British" point of view.

"The nint is to offer a halanced of the community of the firms own training programmes.

"Business systems" is a new

"Business systems" is a new field of specialization whilin bust-

ing, information systems, the evol statistics in management of what ie known as "O & Al".

Cranfield's new degree effers is rensive study in these subjects in people with experience of business and far these preparing for jobs general monagement. Candda will need a first degree or equi-lept professional qualification

Cronfield school of management is one of the country's largest before schools, housed in a me bulk-ling on the institute of technology's site.

Health economics MSc at York

York University, a major centre of research into health policy and tho application of economics in the National Health Service, is in

National Health Service, is in launch a new pastgraduate course in health economics this actumn. The ane-year MSc by examination will be open to students with a good grounding in ecunumics, usually to first degree level. Its care will be oconomic theory, techniques of unalysis and health economics. There will be opportunities for adding related subjects of madical sociology, and epidemining.

Salford goes into electroacoustics

Sanskrit, Spanish end Swedish are three of the 13 lenguages offered in the new BA honours course in electroacoustics. It is being organized jointly by the department of opplied ecoustics and the department of opplied ecoustics ond the department of electrical engineering.

The course combines e general between the two depart

The syllabno includes econstics Much of the teaching will be in transmission and reproduc

amail groups. Assessment will be by tion of endio signals.

a mixture of convectional papers, in mothemories and either physics or applications. The course for 20 stunders of the course for the course dents eterts in October.

DHSS to help OU course

The Department of Heelth and Social Security is to halp fund a new Open University course which will examine the problems and aceds of the increasing number of older people in Britoin.

beneficiel results of dissemination information obout the problems arising from the increasing proportion of eiderly when this was linked with prectical guidance about ways of teckling them.

The post-experience course, provisionally fitted "An Ageing Population," is to be presented for the first time in 1979. The DHSS has given £75,000 to finance staffle econdments to the team producing the course.

Mr Devid Ennels, minister of state for social services, said this week that the course would have a "netional significance". It was, he added, impossible, to exeggerate the course well as the course at the course and social welfare courses at the course team.

Construction

This NEW course, attriling to Saplembur, ollers:

A new approach to Civil Enginerating for those who wish to lake on the ohallenge and accidental ol a career in the production see lor of the industry.
An integrated four-year sendwice course which tekas account of industry'e changing needs.
A progressive end stimulating an

A progressive end simulating and viconment for teorning, with close etudant/etelf floreon. Minimum entry requirements are live GCE posses, including matter matter and physics, of which methomatics and et least one other method eclence subject. methomalics and et last on other opproved eclance subject must be at "A" teval, or suitelle ONC/OND. for lurther details write a talighet Department of Construction, Cristal Administration, Headington, Orland Off eff. Jul Gulerd \$4777, ext. 516.

for a London Duversite I vi DEGREE . Walvey Hall, the only conservation college with full courses for London University External 114 degrees, provided individual instruction by highly qualitative and the conservation of the college of the University Executed the copy of particle individual instruction by highly quarter individual instruction by highly quarter individual instruction by the content of the con Wolsey Hall Skin

MINES HON ANALYZOTE

COURSES

OXFORD POLYTECHNIC Civil Engineering

-- STUDY AT HUNE,

ary pusts over the past two years had doubled. This was becouse of uncertainty obout the future: with the loss of the guinquential system universities could not plot ahead.

related outside the second of the steady state shown in the figures is partly a reflection of the slower rate of increase in student animhers, and partly because of the freezing of pasts in the last two or three years as a result of the libeach cuts.

In polytechnics also, expansion has slowed right duwn and there has been a spilineer from the closure of the colleges of education; redeployment of colleges feetners in polytechnics means stiffer competition for autsiders.

Movement between institutions, such as it is, does not create more posts. Each one that folls vuenant is tigorously examined and more often than not left unfilled. Nor does promailin create o voconcy, though the At the same time as the number of posts has fullen there seems to have been a disproportionate in-crease in the number of these seek-ing fur jobs us o result of the expansion in the post decade,

Dentand is uxtremely high those subjects that were top popularity with etudents a fow yours ago and where student nuothors expanded considerably; English, history and sociology. Those subjects, in both universities and polytechnics, claim to be swamped with emplicants when a post is advertised.

Sue Reid reports how

like Barbara Cordelle

with its first course

testing programme

music student guinea-pigs

helped the Open University

The satistics from the Assacium of the collection statistics published by the University Grants Committee. These show that is 1964/65, there were 11,191 lecturers and assistant lecturers to pay move almost disappeared) in tellifore posts paid entirely from university funds in Dritain. A year later, there were 14,501, an Increase of 3,000.

By control, in 1972/73, there were 19,144 lecturers and assistant lecturers, and predictually the same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers, and predictually the same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers and assistant lecturers, and predictually the same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers are grade is the one must be same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers are grade in the same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers are later in the post of the same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers are later in the post of the same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers are later in the same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers are later in the same ligare, 19,167, in posts four years later, in 1975/76.

The lecturer and assistant lecturers are later in the same ligare, 19,167, in posts four years like years and posts accusionally appear, but these same ligare, 19,167, in posts four years like years are grade in the one must like and ligare, 19,167, in posts four years like years are grade in the later and assistant lecturers are later in the post in the post in the post in years later, in the first of four articles on April 15, 1977. There were 166 in the first of four articles on academic career prospects with a later in the first of four articles

London, there were sometimes 200 appliesnts. In social sciences, the Palytecht-nic of Central Landon soid it olways had plenty of opplicants. For a psychology post in March it had 23, which was causidored high.

Where have all

the jobs gone?

Another very popular area with applicants is environmental science; geography (which recently at Swansee attrocted 63 applicants for a see streeted 63 applicants for a lectureship); zonlogy (ugoin at Swanses, 90 applicants), to u less oxtent geology (ot Bedford, Dr E. P. Roso estimated there would normally be 20 to 30 for n past) and biology (which attracted 40 opplicants for o lactureship of North Staffordshire Polytechule).

Demend for jobs in the pure The problem is the same for subsciencee, however, oppears to be jects allied with srchitecture.

The Open University has for the first time used e camprehensivo developmental testing programme prior to the leunching of a new course. The unit texts of the course, "Elements of Music", due to be introduced next Jonuary, have been extensively monitored on two "guinee pig" groups of unsuccessful opplicants to the university.

newertised there is a flood of application.

eattro. Manchester Polytechnic Tho more popular choices recently hed 85 oppileants for a lectureship in physics, all of good quality. The same applies in the land. The EEC was not high or mistry. The Polytechnic of Control London enid h hod not hed a physics of chemistry post for some tima, but when there was one advarded of Plymouth Polytechnic thore were some 80 opplicants.

Subjects leading to go referenced to the controlled research of the controlled res

of computing.

advarised of Plymonth Polytechnic thore were some 80 opplicants.

Subjects leeding to o professional qualification ere in autother rother special entegory. In law, universities and polytechnics are not only competing with each other but with profession and tire higher salorios offered there. This is also true in accountancy, and branches of computing.

The previous educational experience of both groups was not significantly different, says the university research team. Of those who
remoined to sit the final examination estalament ranged from GCE
O level to e university diplome or
coversity to the same way as normal Open University students.

"Elonents of Music," due to be introduced next Jonuary, lave been extensively monitored on two "guinee pig," graups of unsuccessful opplicants to the university hos effectively modified the course in the light of the developmental tests. The original course was lovered through by 20 similer guinearity valuateers.

The results of the testing, undertaken by Dr Michael Nathenson, Dr Berbard Hodgson, of the OU's Institute of Educational Technology, have been published in a peper antitled optimistically "Developmental Tests of the course resulted in learning more effectively more efficiently and with fever problems. But the drop-out rest for both guinearing source efficiently and with fever problems. But the drop-out rest for both guinearing more effectively from the programme is surely through the programme is surely through a second group fell by two course worked through the programme is well and the units, which to provided a written feedback. They submitted is compared when the first group Following allowed an increase in length of evel of the control of the control

By contract, in a pure academic subject such as philosophy there is great demand. Durban advertised recently what was thought to be the only becomeshop in the subject this year, and there were over 100 applicants, which for philosophy was considered particularly high.

The most common connect from the control of the contr both universities and polytechnics is the high quality of the applicants compored with several years ago. Many now have lirst class hottoms degrees, PhDs, and research experience. Mare and more tood or the property of the and research experience. More and more tend to stay in at their near university and complete their research before hocking for julis, rather than seeking them midrescauch, as was the case several years aga. And more applicants tend to have held research fellowships. The average age of an applicant therefore for a lectureship has risen in 24/25 to 28/29.

At Manchester Polymorphic subsequences

At Manchester Polytechnic where there were 85 applicants for the physics post, Mr. J. H. Appleyard of the physics department said namy had first class department said namy had first class degrees, PhDa and four years' research experience and still did not make the short list because they had not the relevant industrial experience.

The shortage of maney at present makes it more difficult to recruit lecturers with apprapriate industrial experience.

Completed or nearly completed research seems increasingly to be an essential qualification for a lectureship. Br E. P. Rose, a gentngy lectures int. Bedford Callege, Lindan, sold that indess the past demanded a partirular speciolism un applicant's chances, without a PhO, were slim. There were very few job oppartunities lu geology

few job opparimities in geology apart from the universities, he said, and more people were being forced to go akrood.

The British Cauncil confirmed this. It said there was more response to advertisements requiring little experience, such as in Finland or Norway, where often the Teaching English as a Fareign Language (TEFL) qualifications were not needed, But at the same time, for other posts, acodemics ware realizing more and more the necessity of some sort of postgraduets qualification.

Despite the proliferation of jobs in the oll-rich countries, the AUT said they had little evidence of recudences elmosing to go there. The more popular chalces were Canada, Austrolia and New Zenland, The EEC was not high on the list because of language difficul-

All agreed, however, that more gnoul scholars is being jost."

from o population closely resen-bling the expected etudent popula-tion and in final reward of a holf-credit far successful students en-sured they were majivated in the



David Walker on

Urban Studies

Bristol University's

School of Advanced

One small symbol of the state of policy studies and the relationships between gov-erantem and the neadentic world behind them is carried in Professor Murray Stewart's wallet it is the entry of his furner colleagues

at Kem University's urban and regional studies unit and a source of pride in his fel-

lovs at Bristol University's school of advanced urban studies. In Whitehall terms a sine quar non of the trust an which the government thing at all Professor Stewart's emirce in the partment of the Environment in Marsham Street.

Having easy access to government offices is only one small part of what ought to be continuous contact between civil servants and academics if policy atodies are to mean any-

thing at all. Professor Stewart's entrie to the DoE brings the Bristol school into Whitehull's world of known quantities.

This infinacy with government is a churac-terisde of Bristol's school of advanced urban studies, where it is an articla of faith that

policy onelysis to an academic setting need to have had experience inside government. Professur Tooy Eddison, the director, was a town planner, Professor Stewart, deputy director, worked in the ill fated Department of Economic Affairs, the school's lecturers were planted by the school's lecturers were planted by the school's lecturers.

The school occupies an old etone linuse in

brothures widely distributed in town holls and

MOTICE BOARD

E. L. Furness, previously personal pro-fessor in the department of evolutionles

appointed professor.

De D. K. Peters, reader is medicine at the Royal Postgraduate Medical School, London, has been appointed to the chab of medicine from October 1, 1977.

Charles Middleton Elliott has been oppointed as the list professor of development policy and planting and director of the Centre for Development Studies at the University Cultege of Swansea from September 1, 1977. Dr Roy Walls, lecturer in sociology at Surling University, has been appointed to the chair of sociology in the department of social studies and in bean the department of Sucial Studies at Queen's University of Relfast.

ASSE AMPOUNTED WAS

Universities

Belfast Director, physical education centre and head of the department of physical edu-cation: Alan Kelth Nichols, Pro-chan-rellor: The Rt. Rev. Mourignor A. H. Ryan. Sentor lecturer: Jones Wilson Russell (fusitare of Professional Legal Studios Lecturer: Wilson Alan Ed.) Studies), Lecturers; William Alan Gal-lagher and John Edward Magnire (In-stitute of Professional Legal Studies); Dale Allen Stogleton (town and coun-

Vice-principal: Professor F. D. Guo-

Strathelyde Strathelytic
Senior lecturer: K. J. MacCallina
(shiphuliding and neva) architecture).
Lecturers: S. K. Tagg (arts and sucial
suidles); A. C. Nicol foliagnificating
until i N. P. Ritodes (English nuidies): N. M. Kay (Strathelyde Inishiess
school). Research fellows: F. C. Leuf
(blochemistry); B. R. Lynch (electrical
engineering); D. S. Leather (market-(blockenisty); B. S. Leather imarket-lugl; P. R. Norris imetalling;); D. A. Jones Ipure and applied chemistry).

the Administrative of the Northern Branch Successful of the Northern Branch Successful of the Northern Branch Successful of the Registrar at the above address. Empirical to the Registrar at the above address. Classes will be contained at the University of Manual to the University and Manual to the University and the Stoff to the Registrar at the above address. Classes will be registrated to the Registrar at the above address. Classes will be registrated to the Registrar at the above address. Classes will be registrated to the Registrar at the above address. Classes will be registrated to the Registrar at the above address. Classes will be registrated to the Registrar at the above address. Classes will be registrated to the Registrar at the above address. Classes will be registrated to the Registrar at the above address. Classes will be registrated to the Reg

17. Plucentel, professor of chemistry, I receive and the New Joints and Brokeley and Englicenting "the Jacobson lecture by Mr. M. A. R. Freeman, consultant orthogradic surgeon at the London Hospital and director of the biomechanics until at imperial College, will be held on Mny 10 and May 16 respectively to the Courts Amiltonium of the School of Physics, University of Newcastle apont Type.

A more-day conference to discuss the indiark report is being held at the University of Warwick on May 14. The conference will be opened by Professor George Balti, director of the industrial relations unit of the industrial and a manufact of the

thous" in three-day residential work-shop, will be beld from May 16-19 at

The wide range of applications of intrograces are by today's maintarturating industry will be evaluated at a special pworday seminar helia helia at a pulstey College of Technology on May 18 and 19. Among speakers will be Dr. Norman Dean, of Robert Gordon's Institute of Technology and Dr. J. P. Smart, head of the introprocessor application control of and engineering division of the Warren Spring Lubbootomy. Betalls from Blaw 1. Henson, Press Officer, Public Relations Section, Palsley College of Technology, High St, Palsley, Renfrewshire PAI 28E.

. . .

The conference will be opened by Professor George Rain, director of the industrial relations nutt at the inversity and a manther of the Bullock committee, who will give a Bullock committee the Bullock committee of the Bullock commi The Society for Research luth Higher

census of population root of the SSRC. Sessions incline to the SSRC to the SSRC to the testine to the SSRC to the

Chemistry—£3,811 from the Syntex Research Centre for a study of prob-lems associated with the development and application of assays for rat plasma under the direction of Pro-fessor C. Brooks; BF40,000 from the North Atlantic Trenty Organization for 9 study of synthetics, spectroscopt, and structural studies of platform and gold performacyl-phosphiline complexes

the Mersey Regional Health Authors in support of a sindy of fertile is acute leukaemia under the directly of Dr. M. J. Layland.

Allerablishing—Et9,379 from the Mge for an investigation land genetic and utolevulur unalysis of the transformation of exciterialist coll Kt2 plang INA under the direction of Dr G. O. Thomshipsee.

Computer laboratory-124,416 from the computer nanoratory—124,416 from the SSRC for research two provision of guidance to computer meet in unita-sities under the direction of br 1.4. Ally mid by Newman of Bhanagtan

Manpawer Services Commissioning search on humanistorical desease nestrogens under Dr R. E. Oda,

Metallingy and Muterlais Technolog-Professor J. R. Bailey, 114,690 from the Ministry of Defence, for work of one micro dowelling; 16,494 from the Ministry of Defence, for work of one materials for advanced majal cases, processes; Dr. J. Custle, 145,743 from the SRC, for work on the evaluation and development of surface elements, specificacy, etc.; Dr. A. P. Middows, 11,950 from tikAEA, for work on the calculation of phase stability are calculation of phase stability pro-meters in Fe/Cr/Ni systems. Hannan Blology—Professor P. R. Dws. 12,295 from the DUSS, for work a induction of labour.

Noticeboard is compiled

Open University programmes May 7 to May 13

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SOUTH EAST ARTS CONTRIGHTAL BURSARY SCILETE £1000

Open to writere living or working in Keni. Surrey or East Guesex.
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Monday May 9

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18.05 Stoogen and Relief From Copernities and Social Implicultures

18.05 Stoogen and Relief Implication and Social Implicat

15.40 Urban development: Motorways an Chicago und London (Di-2d) long the Indian Chicago und Long the Indian Chicago

17.41 Education 10.304; prog 12: 11.41 ond 88C 2

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Allersative broadcasts for peris of Hard Scotland and Wates salve broadcasta for peria of nat and wates of non-sistent formation from the first formation for the first formation for the first formation of acceptance of a control formation for the formation formation for the formation formation for the formation formation of the first formation for the first formation for the first formation formation formation for the first formation for the first formation formation for the first formation for the first formation for the first formation for the first formation formation for the first fo

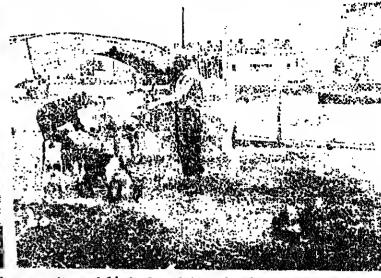
government departments sny, le near enough the hub of government in Loudan, but for enough away tu ollow unintorrupted intensive tessions for busy bureaucrets. Professor Eridison same up the relationship with government, without modesty. "We have only been going a short while but have attropted staff with good sculentle hackgrounds and much experience in central or benl government (some seconded) who are not only prepared to drop their disciplinary fences but who are also committed to working in this difficult territory between government and

fficult territory between government and

the scattering world.

"Already, in a very shart time, we have been successfully lavelyed, both in a reaching and research expansity, with several governments as various levels—for ment departmente at various levels—for example, the Dok. Department of Health and Social Security, Homo Office, Cabinet Office, Department of Trede, Department of Education





London's dying docks are a major problem for the urbnu planners. A novel kind of usefuiness has been brought to one part of Surrey Docks with this small farming and recreation project.

Eddison's men shed a practical light

mile Affairs, the school's lecturers were planuers, architects, local government researchers, few are "pure" ocademies.

The school's relationship with the Dobought to be close. The department has provided the money, though the university will soon be taking on overall responsibility for the school's finance. In theory its courses and consultancy work will poy the school's way, but Professors Eddison and Stowart have confidence in the continuing support for the school of Sir Alec Mairison, the vice-chancellor, if not of oil the senior professoriate, sume of whom do not think the school sufficiently sesdemic. eaid, soonest manded.

For another, while the school has undoubtedly strong teaching links with government planting courses and sondnars for central and locol authorities, its role as a source of new knowledgo is not clear. At present it is largely parasitical on primary research being done elsewhera. The strictly defined academic payoff from the school is not immediately apparent—lis staff, its range of courses and seminars could be transported to a non-university location and there sceams no reason why it should not work as well.

Professor Eddison though he was recruited. Clifton which has been turned into offices and

seminar rooms linked with onother block with sudy bedrooms and kitchens, Bristol, es the Professor Eddison, though he was recreited to Bristol four years ago by Sir Colln, takes a very different view from his predecessor, who wonted a research centre concentrating of traffic problems and issues in the "built en-vironment". It is striking that Professor Eddi-son's innugured lecture, delivered early last year on the theme of linking urban studies with analysis of government policy, made no

The reolization of Professor Eddison's und Professor Stewart's conception of a rentre for policy studies, with special reference to local government, housing end plunning, takes tho form of an extensive series of sominars, short courses end, eventually, degree work for pub-

Whitoholl civil ecryanic, loral outhority officers, people from the National Health Service, uniforelized industries, ad hoc bodies such as the water end lond authorities, come to Bristol for concess in urban economics, housing policy, public transport, local govern-

nent finance. Bristol creates in theory an authorities io Britain."

Of course this is not the whole story. For one thing the school, as now illrected by Professor Eddison, is a reincarnation. It was originally the child of Sir Colin Buebanan and the view now taken of his association is least eddy strong teaching links with government plauting courses and sondnars for centrel and local authorities, its role as a source of new knowledgo is not clear, At present it is largely parasitical on primary research being done lesswhera. The strictly defined academic paylocal government man can exchange ideoa with academic detachment.

The school bas plans to extend this function. It wonts to set up a sort of information bonk containing the results of research in housing transport, planning and an inventory of people in the field. Subscribers could phone Bristol and be given at once some fruit-

inl contoct.

The school itself does not do much research, which means in a sense its staff live off the capital of ideas and experience they brought with them. In the Stowart-Eddison vision, however, staff members are being constantly accessed by access to internal government. refreshed by access to internal government thato. They should be stimuleted, too, to draw from a range of social science disciplices end not ollow their work on, eay, tha problems of the "inner city" to be confined just to economics or sociology.

As far os the two professors are concerned, there have their accounts of the social professors.

As far os the two professors are concerned, they have burnt their neademic boats. Not, they would emphasize, os far as standards of rigour or ecademic thoroughness go, but in the sense of commitment to a single discipling ond the univarsity jobs that brings. How to evaluate the school's work? Its ethas tenda towards what in the local sutherity world le called "corporete management"—plauning the whole of an outherity'e work

Throughout the rest of the region the col-

leges have survived anseothed, helped by the accidents of geography. Rumours that Blahop Grosseteste might clase have proved unfounded. The college is now the only one in Lincolnshire and, therefore, vital for inservice provision for o large orea.

Similarly Matlock, o small mainly rural and monotechnic college, seems to dely most of the published criteria for the reorganiza-

anytiding away from its intensive courses and seminars curaly they are better informed. A recent set of courses, some of which involve stoff trovelling to centres in Scotland and Wales to give papers and talks, were about the new Community Land Act. Its manifold provisions are complex, and in interpreting it the school hopes to perform a etralghiforward educative function.

Professor Eddison's ambitiens include aiming more at the front men in central and local government—the councillors and the MPs. Bristol is talking with the Social Science Research Council about a some that would find MPs on a two-day course onco

would fund MPs on a two-doy course onco affairs, housing and so an. A scheme is being worked out with the Open University to provide courses for councillors and intending councillors on how committee systems work end how best the mossive local government muchino can be run.

Bristol is not twiquo—the Institute of Local Government Studies at Birmingham University from which Professor Eddison himself cama does work in parallel — but its cloim to be doing policy etndies while others talk obout it has some merit. Looked at ac a lubricant for a bla machine or simply as a sustrained.

through the region will have two centres of laacher training, both in universities.

laacher training, both in universities.

The future of Homerton Collego, Cambridge is obready assured. It will become an approved society of the university of a dato to be fixed by the cenata. The present BEd degree will be taken for the last time in 1978 and a new two-plus-two degree introduced in 1979. The collego did not ochieve ite new cratus without e fight. Some academics at Cambridga University srgued that standards at Homerton, porticularly in mathematics and science, would never be as high as for other undergraduatas.

cant for a big machine or simply as nautrel ground where the different bits of government can talk to each other on a baels of confidence, its work seems increasingly noces-

Geography has saved lives of several colleges

Geography is the key to the latest batch of Government proposals for teacher training in the cast midlunde. The regionol map of twisters of education will remain virtually unchanged because of the need to serve area lib-provided with higher education.

Several mergers had already taken place and this year's list makes only one change tidying up the picture by suggesting that called Hall College should cease initial teacher training and that its craft facilities which will have the largest teecher troining and in the region with 1,000 places.

Eston Wall is not a managing to suggest

Eston Hall is not attempting to suggest that it should receive more places than those these sliceated to the polytechnic but it sold imagically a that the cause of its unusual and imagically a traffic and imagically a tra and Imagioative that the cause of its unusual and Imagioative eraft course would be best of the one-year course for mature men has been the mainstay of its work end its adventurous nature received official approval as lats as December last year when the Government chose the collage as one of several to ment chose the college as one of several to specialize in retraining craft teochers.

Though applications for the retraining tourse have been overwhelming, these and maintain the site. Nottinghamshire County Council the site. Nottinghamshire County Council, however, has said that it would like

to msintain some higher education in the unrth and a polytechnic, college and authority working party has already made some proposals which were put to the secretary of state last week.

These include the transfer of in-service places from the polytechnic to Eston Hall and the development of the creft teacher training course from a one-year to three and four year courses. Another possibility is that some polyactinic courses besides those in education could be taught at the Eaton Hall slic and that the college could house courses for local government officers.

These proposals are preferred by the outhority to the idea that the college chould simply become a faculty of the polytechnic. The Deportment of Education and Science would be most unlikely to approve the latter, which would probably not be feasible because of the dictance between the two sites and the arrangement of courses at the polytechnic. It is intended by the local authority, bowaver, that the polytechnic should administer any that the polytechnic should administer any courses which can be organized at the site.

should be trensferred to Trent Polytech-

nie if sulteble arrangemeats cen be mede.

Discussion for the incorporation of

Keswiek Hall Into the university should

of Kesteven College should close.

proceed.

East midlands: Initial treining et Eaton Eest midleads Hall College should cease: provision for Bishop Grosseteste coursee in craft, design end tachnology Derby Lonsdele Col

East Anglia: The Peterborough onnexe Matlock

If the proposels are accepted teacher Keswick Hell

training places in 1981 will be: ... (in East Anglia University)

Derby Lonsdele College

Leiceater Polytechnic

Loughborough

East Anglie

Trent Polytechnie

Nene

courses which can be organized at the sito.

Most of the Eaton Hail staff will be made redundant if the package goes through, as the few teacher training places and appears to heve accommodetion which the college has to offer.

In East Anglie, as in the Eest Midlands, chance has favoured the collages. It has few teacher training places and appears to heve accommodetion which the college has to offer.

(In Loughborough University)

of the published criteria for the reorganization. Hera egain, tha college's position must be one of the keys. Derbychire is the most populous county in Britain without e polytecinic or a univarsity, the only other higher education establishment is the Datby Lonsdale College of Higher Education formed from a merger of a voluctary teacher troining college and Derby College of Art end ing college and Derby College of Art end Technology.

Metfock Already has a flourishing youth and Community course and hope to have a Nottinghem University Combined Studies dagree acon. It also has a significant proportion of lu-cervice work.

A factor which certainly swayed Cambridge academics in favour of Homerton was the absence of any cultable afternative. Unlike their counterparts in Oxford they were not prepared to abandon the college to leolation.

Similar considerations will apply when the University of East Anglia decides whether to morga with Keswick Holl, Norwich's Churcit of England collage of education.

It is difficult for voluntary colleges to merge with maintained institutions but eleewhore, church colleges have merged with university depertments. St. Luke's Exeter bas merged with Excter university and plans to merge St Hild and St Bede with Durham university are well under way. 500

The position at East Anglie is slightly dif-ferent because the university has no educa-tion department of its own, but this might prove an advantaga rather than a drawbsck. Whatever happens, Kesivick Hall will probably have in eccept the Government's proposal that its initial teacher training places should be cut from 700 to 400.



Undergraduate : drinking

Sir.—Alexander Gunu's interesting article on the problems of undergraduate drinking (THES, April 22) seems to me to overlank mic importnut reason why undergraduates get drunk regularly. This is unite shoply that at the age of 18 many people are, for obvious reasnas, un-uccessomed to sicolulic ilrinks. Recause of this thay simply do not know when to stop.

The inexperienced drinker can

pass very very quickly from the stage of being reasonably copable to the stage of being totally incapeble. I knew this from bitter

As Mr Gunn says, with advancing yeoro ona learns, somethires, to may "no". This is an necessarily duo to "strength of mind" as Mr Gann hus h. As you get older your toler-suce focreasee and you have length-ening memories of feroelous hong-overs and near-fatol accidents. More Important, you learn whot your own connecty is ond you begin to recognize when you have lind enough. It may be a question of recognition rother than of wisdom.

rother than of wisdom,

Mr Gunn poiots to the dangers af olcoholism, Drinking is for adults as well as for undergraduates, e pleasant and convivial way of refreshing themselves. Ooly a many minority of those who had happy times getting drunk as undergraduates are going to become ulcoholics. Alcoholics are, typically, drawn from people who "frown their sorrows". Those who on joy drinking and the conviviolity which goes with it often find that when they are unbeppy drink is no refuge ut all—quite the contrary, they are likely

unheppy drink is no refuge ut allquite the contrary, they are likely
to be "off their beer".

To sex and cash in your headline to Mr Gunn's article you might
have added drugs and political fauaticism as problams with which
undergraduates have had to coatent.

If there has been a revival of drinkling, perticularly of "real ole", somo
people, myself included, would regard this as a healthy sign.

Yours sincerely.

Sir,—Writing on behalf of the Assi-clation for Recurrent Education, may I congruinlate you on your leader of April 15 and the attention paid in recurrent coloration gener-ully in that issue?

The full page article by our prosttlent, Berry Fowler, represents the views of the association cogenity and succincily and it is probable that some of your readers will want to know more about nur purposes and sctivities. The former are best represented by this extract from our

The essociation exists to primote discussion of and the estoblishmant of activities within a wide variety of settings which come under the heading of recurrent

Recurrent education consiliutes a comprehensive educational strategy described including all lovels of educational provision. Its essential characteristics. tional provision. Its essential characteristic is the distribution of educational opportunity throughout the lifespon of the individual. It ullows the alterno-tion of periods of structured edu-

Its occeptonea will require e reconsideration of overy facet of existing educational provision in that it seeks not only to raview the luteraction between echooling,

Sandwich courses

Recurrent education

for a particular pottoro of learn-ing, work and leisure, a greater filling to education discus-its goal is the learner with sion than any other postwar Primu ing, work and leisure. Its goal is the learner with grenter untounnity, better roulpied to participate in the continuous shaping and reshaping

of lils or her environment and As you reported in previous issues, the association was formed in 1975 and formulated o detailed

policy in its first residential conference in September, 1976. Our membership is widely representative of post-compulsory cilication in Britola and abrood, and we welcome ony person or organization inter-ested in the evolution of the sort of educational strategy described

Sir --- Your editorial of April 15 was worthy of the great tradition of The Times leaders. The THES has lodged came of oge !

Britoin.

You rightly imply that "the rolo

compulsory elementary education in the creotion of political demo-

This is too important a muner for any one of these essential grauns to be left nut in the cold and inimical to the system. A

thorough roview by a strong cum-

mission reprecenting all parties is

Director, Foundation for Management Educo-

Managomeat Hense, Purker Street,

Ynurs faithfully, PHILIP NIND,

dividual. It ullows the alternotion of periods of structured education of periods of structured education of experience with work, lelsure and retirement. It is to be regarded on an oltomativa to the traditional provision in which the great majority of formal cilucation to experience din the first 25 years of life.

Its occeptones will require e reconsideration of overy facet of existing educational provision in that it seeks not only to ravious.

Identify the self-base decrease in the alternotic through traditional dust education programmes, altrough the Open University, through post-experience courses of lusiness schools and management centres, threugh activities generated by the industrial training boords and the Training boords.

But it has all been decreased and the post-experience of the services and the post-experience of the services of lusiness and the programmes, altrough the Open University, through post-experience of the system—

The provision of the system—

The provision of recturent education have been creeping into the system—

Through traditional adult education programmes, altrough the Open University, through post-experience of the structure deducation programmes, altrough the Open University, through post-experience of the system—

The provision of the system—

Through traditional adult education programmes, altrough the Open University, through post-experience of the system—

Through traditional adult education programmes, altrough the Open University, through post-experience of the system—

Through traditional adult education programmes, altrough the Open University, through post-experience of the system—

Through traditional programmes, altrough the Open University, through post-experience of the system—

Through traditional programmes, altrough the Open University, through post-experience of the system—

Through traditional programmes, altrough traditional p

But it has all been happening la a hophazaril way, and with the compelling need for the economic use of scarce resources it is essantial that there should now be some over form of contribution which will recognize resources. the lateraction between echooling, work and leisure, but also to make more meaningful the relationship between the ecquisition and the application of hueran knowledge. It therefore represents a new contribution to human rights ha which learning is acknowledged as a personal matter and each person's claim en educational provision represents more claorly his or her preference.

specialized und less well geored to this type of treotment, and for them the right kind of placement is more crucial.

sentifician, London 1981.

Deating the bulge of projection system.

From your cride "Title of the system of the sy

Sir,-- I was omused by the said Minister. Wantil it not be possible now for the Government to appoint a strong cumulssion or committee in review ond make recommendations for future past-school education in the light of the various pointo you so cloquently make in your editoriol? A nutional advisory council is a serinus project.

first step but is not sufficient. There is furnidable confusion of thought, intentions and policy obunt postschool education following the phenomenal growth of the last 15 Tho schemo to larroduce such yearo. A new reviaw need nut pull up roots, but it will help in concentrota people's mind in a way that no ndvioory council can possibly achieve—and we man remember that the decisions taken during the next few years will radically of recurrent education in the birth of suclal and industrial ilemocracy may be as important as then of

Some people are better at mise cracy in the last century". Let us moke quite sure that we have o fully accaptable system of recurrent calucation—fully secepted by the themselvee, by teachere at schools, by paroats, by government and by

English at Cambridge

Sir,—Roading Culin MarCahe's article on English ar Pumbridge (THES, April 22) promined in my public the Cipen University and the scheme was being extended the content of the Cipen University and Cipen Unive

Telephone tutorials

nublished on the subject of tele phone tutorials in the Open Unite sity (THES, April 8). Amused by rritated because the impression given by Robin Mend that the whole thing is a "bit of a girgle" and put the wrong light on a my

tenching technique to help these hundicapped students who are as handicapped students who have able to attend face-to-face intorial was phioted in the London Region under the oegis of Beo Turck who still has to fight considerable spent from his fedfory academic. The whole idea of joining sem is students, with a unter, to a Codecuce Coll, was und is a brilliant see There are, of course, many seen and those of us, who have been on these calls, know only to withat Robin Mend's experience as our own—initially let I some as our own—initially held

ing the technique of telephone wa ing, than others are And sa people are better or listening si using telephone tutorial, to others are. There is no feeled in body-language terms—and es has to loarn on cither side of the educational wire, to listen for the as to whether one has the at miteration of cither the tutor of the students, or whether they has tiptned oway or gone to sleep a

But that it is a potentially se cessful form of touching is being munifest more and more such rates niore tutors become trained a this different and challenging sell. and those students who have a rely on telephone tutorials for m form of tutorial, also become non and more practised as they po

Inn Bradley reports on a rare growth area in the world of learning



test one sector of further aduction is undergoing a rapid expunsion at present; the training of trade union officials and orembers.

Last month the Prime Minister opened the man recent perifers. Last month the Prime Minister opened the most recent insnifestation of this boom, o new residential training said conference centre for the National Union of Railwayanen, housed in a Sussex mansion which cost £123,000 to buy and £250,000 to convert the lecture rooms and accommodation for 28 students

The NUR is the latest union to The NUR is the latest union to join the fast growing trend of setting op residential educational centres. One of the first trade union colleges was set up in Esher in 1952 by the Electricians and Plumbers Trade Union, which is now extending its second college at Cudham, Kent, opened two years ago, to pro-pide a further 80 residencial places. In 1964 the General and Munici-

In 1964 the General and Municipal Workers' Union opened Woodstock College, at Surbiton, with accommodation for 40 students. In September, 1975 it took over from Shell a large house at Hole, near Monchester, which it has converted to the problems of a pure leading to the problems of the problems of a pure leading to the problems of the probl

Last summer the Association of Last summer the Association of Scientific, Technical and Manugerial Sisff opened Whitchall College at Bishnp'o Stortford, in a house bought from the Gliby glufamily. ASTMS has already spent f250,000 on converting it, and is about to spend a further £150,0000 on a new teaching block, a simultaneous translation unit, and rooms for a further 50 students. for a funiter 50 studento.

In September the Transport and Gueral Workers' Union upened a huge conference and tradning centra in Easthourno which con accommodate 280 students until la

In September the Transport and Goueral Workers' Union upened a huge conference and trading centra in Easthourne which con accommodate 280 sindents until a equipped with the lutest audio-visual teaching alds.

The standards of comfort at these new trada union colleges out conference centres are bigh. The NUR's Sussox munision, fur example, has a heatest swimming pool, a hard teamls court, and 43 acres of grounds. The cynical might suggest that the main reason for trada unions selting up ouch training centres in management in trade unions selting up ouch training is dune by members of the mainn's education deportment, with must do lecturers being brought in for specialist tapics.

The grawing interest in worker participation in management install unions selting up ouch training intending to use its new residentlel

reasons for the considerable expansion in trade only education to the last few years.

A large amount of legislation has been passed on labour issues. The Employment Prutection Act, tha Health and Snfety at Work Act, the Equal Opportunities and Equal Pay Act, and the recent legislation establishing union trustees on pencion funds, have all greaty increased the ronge of subjects on which both full-time union officials and shop stewards and ordinery workers uced to be expertly informed. Purply as a result of this mass of new lows, and partly to nuss of new lows, and partly to bring Britain in line with other EEC countries, tegislation is likely before the end of this year providing for workers to be allowed regular thee off with poy for trade unlar three off with poy for trade

nto 8 training centre with 38 res- ning a series of courses on t nationalization of the aerospaca in dustry. Others oro mora general.

A typical general one-week course at the ASTMS Whitehall course at the ASIMS Whitehall College involves lectures on union history ond odministration, new legislotion, equal opportunities, time off ond anternity leove, hoolth ond cafety, pensions, job security ond unfoir dismissal, industrial democracy, chilective bergoining techniques, and inflation and wogo restraint.

and wogo restraint.

The GMWU has three books

The new NUR conference centre : helds 28 cemfortably

Where British trade unionists

go to learn their lessons

course was a two-week get-together between the Board and the Union's national executiva committee in February and there are plans for With the likely advent of Industrial ilemocracy in many British firms within the next few years, trade union education is bound to continue expanding, and the number and role of the individual union colleges and training centres has already run two special courses on industrial democracy at Enst-bourne for full-tima union officials will increase.

The Bullock committee recon--putting an several courses at Will-tchall Callege for potential worker mended that the training of employee representatives on company boards should be undertaken by the TUC and individual unions in canjunction with the education service. It commended the system The Individual trade union colleges, of cource, represent only enc aspect of the total provision for trade union education. The TUC now operating in Sweden, where new employes representatives are given three or four weaks' residential training of one of the trade union colleges during their first has its own training college on the first floor of Congress House In London. It is non-residential and cencementes on courses for full-time union officials and for the 200 or so theors who lecture in trade union of outles in colleges of further education, polytechnics, WEA districts, and university extro-mural departments. In 1975 these insultations two years on compony boards.

Traile unlouists feel that n oub-

centre to prepare members for the in the public sector pravided about that while about £20m of public sime when they will be sitting on 1,150 courses in trada union otudies movey is spent on management that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about the first sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about that while about £20m of public sector pravided about £20m that while about £20m of public movey is spent on management aducation avery year, excluding universities and independent atonagement institutions, virtually nothing is spent on educating trada unionists. Lost yeor, for the first time, the Department of Education made a £400,000 grant to the TUC specifically for trada union education, but it was only o fraction of the amount mada ovalioble by other European gavernments. other European guvernments.

> £3ni would, according to the Bullock committee's calculation, provide four-weak residential courses for 6,000 people, the number which it estimated would need to be trained initially as worker directors.

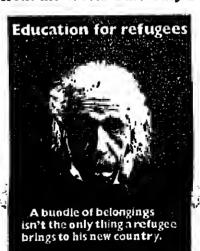
The Swedish government provides an minual grant of £5im for trada milon education. Perhaps as part of the price for agreeing to another your of wago restraint, the British trade unions will exact from the Government a regular stantiel part of the cost of trada British trade union education should be borne from the Government a reg by the Government. They peint out great far educational purposes.

Tim Albert examines recommendations in a new report from the World University Service

Why we stand to gain by making refugees feel at home

A government reception contro and a central fund for ocholarships and fellowships are among the recommendations put forward this week with University Service.

It draws attention to the large that they are oble to receive from their ordeals, that they are educated, and whare appropriate effected retrains the hay that this country deals and solution, resattlement and education of refugees in the members of refugees in the members.



and shop stewords and ASTMS

directers.

The recoption, resattlement the gradient of refugees in the sample of e government strategy and financial terms te this country, in the existing has a financial terms te this country, in the existing sample of the case of

to offer refuge to those who suffer of higher education, and seys that porsecution, and should set up on initial basic target of 2,000 refugeo tultion fees of the home refe, and

accepted or rejected within threa moaths, and there would be special procedureo set up to deal with urgent epplications. Those who ceek esylum but who are already in

porsecution, and should set up on initial basic target of 2,000 refuges femilies e yeer.

Requests for esylum should ba accepted or rejected within threat months, and there would be speciel procedures set up to deal with urgent opplications. Those who " A contralized refugea fund admi-

oeek esylum but who are already io the country should get a special "interim" status.

A reception centre with a fulltims core staff chould be set up by the Government, perhaps in a former educational establishment. Some ruition in English should be invalidable there, but in addition provide up to six months intensive training in "By maintaining formel end intensive formel end income to the new office, the United Nations and internsitional refugee bodies, would have many advantages in reaching consistent docisions on both accedemic and refugee matters.

"By maintaining formel end in-

the leaguage.

There should elso be mede evailable government courons for retraining refugees, and apecial counselling on employment, housing, retraining, oducation and legal status.

A joint committee of government, local government end voluntary agencies should be set up to discuss refugee issues, and local authorities should make one of their senior



What Queen's English do universities accept?

such evidooce?

In order to clarify the pasition we write to every university in unialend Brituin to usk their what their policy was in this regard. We specifically asked: "If an examination is called for, the year require the Joint Murriculation Buard (JMB) examination in English for foreign students or the Cambridge Proficiency examination in English, or do you regard them as equally neceptable?"

We received replies from 30 of 32 linglish universities, five of six Welsh universities and six of eight

Briefly, the replies we recoived can be summarized as follows: The majority of the universities will accept the JMB test in English or the Cambridge Profiency in English, though some would still prefsr O level English

• The Cumbridge first Certificate (Lower) is not considered

prefer other examinations that the JMB and CPE. Two porticularly singled out by one university were the British Council's own tests and the American Teaching of English as a Foreign Language (TOEFL)

colleges of further education in choosing and preparing for an examination which satisfies university matriculation requirements because of the inconsistencies in toriversity requirements. While the First Certificate in Fuglish is generally nor considered acceptable, whe JMH test in English (Overseas) and Cambridge are—but not by all. Thus, a sination orises in which one university rejerts the JMB examination while unother rejects the Cambridge Proficiency examination.

both oxaminations are exacting. Perhaps a movement towards examination in specific purposes is necessary. A sination might be evolved in which the First Certificate in Fuglish, though and you lead to make a basic step towards language proficiency in certain specialized directions.

It is interesting and preparing the university of Cambridge because the functions Syndicate is thinking along similar lines and would like

Proficiency examination.
One university osks for pure

noths applied untils plus physics or on English qualification for entry to a particular course, while mother tasks for pure marks/upplied maths, physics and on English qualification for the same course. Moreover, some indiversities prefer other tests such as the TOEPL test, or the Elbs test, while others have devised their own

in apply for a impressity, his or her choice is often restricted by the requirements of a particular univer-sity and the English course offered by his college of further education. In the survey done by our college singles out by one university wece the British Council's own tests and the American Teaching of English as a Foreign Language (TOEFL) cest.

Two groups—the Scottish universities and the universities and the universities afflitoted together os the JMB—alroady hove cloarly stated policies.

All universities reserve the tight to decide on Individual's porticular case.

While the majority of the universities chusulted require the Combities Proficiency examination or that JMB test in English (Overseas) as equivolence to O level English for mairleulation purposes, certain problems do oriso with these examinations.

The Cambridge Proficiency examination is stated that some proof of compecence in English and the situation is often different; while universities reserve the right to decide on India vidual cases, we have famine the vidual cases, we have famine the situation is often different; while universities reserve the right to decide on India vidual cases, we have famine the requirements of the object of the situation is often different; while universities reserve the right to decide on India vidual cases, we have famine the vidual cases, we have famine the science widely fluctuoting and often cases.

Some of those curious different; while universities reserve the right of the situation is often different; while universities reserve the right and inverse reserve the right of the situation is often different; while universities reserve the right and inverse reserve the right of the situation is often different; while universities reserve the right of the situation is often different; while universities reserve the right of the situation is often different; while universities reserve the right of the situation is often different; while universities reserve the right of the situation is often different; while universities reserve the right of the situation

Kaminotions Syndicate is thinking along similor lines and would like to introduce by 1979 u language test at a level between the First Certificate in English and the Pruficiency Examination. This would be almed at the special needs of the overseas and the special needs of the special needs of the overseas and the special needs of the special n students in such oreas its business studies und science.

Such a scheme would make it possible for colleges of further edu-cation to choose the most suitable examinations for their oversens sui-dents rather than asking them all to sit a "blanket examination". Specialized English tests for particufur subject oroos would be welcome, as it is in the ocquisition of technical vocahulary, and more importantly the specialized forms of writing, that most sindents spend the greater port of their endeovours.

Gensrol longuage skills would be doveloping unil being developed ut the same time, but the students' ability to handle a chosen register and style is more immediately signifleant to both the student and the university or polytochnic.
We ut the flurry College of Further Education would like to thank

the nutrersity outbrilles who helped us by rendying so primipily. We consider that the emisiderable increase in the number of oversens simiants, whose first tanguage is not English, studying in Britain, mouns that it would be desirable if some clarification of university

Early in 1976 those of its comcorned with the reaching and administration of coverseas students, to
decide which English Language
qualification would be most suitanisorous vice where a misority of whom when everturally
to read sciences at a liritish
university.

This decision was important in
view of the fact that the university
asking overseas students far
order to that they had reached a suitfactory standard in English. The
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question was indicated a suitfactory standard in English coverand for criticate in English and was
their first linguage, while the inpaper from yoar to go to the
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Problems also cover the
paper from yoar to go to the
paper from yoar Nit PCB.
Own test also used
It internal language test.
Constraints on JMB (referen, Saffet.)

Acceptance by the university find qualifications neceptable evident. Plus own back-up. Not FCE. British Council own examing a TOEFL considered better, best

Or FCE, British Council, TOEFL

O Level English.

Alierdeen, Edinburgh, Glusgow, Heriot-Wutt and Strafficlyde all accept body JMR and the CPE. Shiring also accepts the Uritish Council's sun examinta or a certificate from a language coore.

The Scottish universities position is successful as follows: Three part of Certificate of Proficiency in English (Cambridge) is considered equivalent in Higher Grade Pass in English or an A level; two parts of Certificate of a ficiency in English (Cambridge) or all of the Certificate of Proficiency in English (Cambridge) or all of the Certificate of Proficiency in English Cambridge) is equivalent to an O Level; Diploma in English Stadies (Cabridge) is equivalent to an A Level.

The Joint Matriculation Board will accept: GCE Boards O Levels; English in gauge at credit level in the London and AED Oversons School Certificans; is and West African Exampling Board Certificate; is Exampling Board Certificates; Cambridge Problem Examinations in English; JMB University Entrance Test in English, It will accept: Plast Certificate in English (Lower); RSA; London Chambers Commerce.

All universities reserve the right to decide on individual cases. Most added tiss seem willing to occupt on it level GCE pass or other comparable quillen. (Although Edinburgh point out that no 0 fevel pass would not acceptable unless the upplicant produced it us part of a complete GCE/GI qualification, fulfilling the General Entrance Requirement).

fam refers to the John Mairientation Board's Test in English for Orms Students 1 CPE refers to the Cambridge Cryfficate of Protecting in Breek furn ; FCB refers to the Cambridge First Certificate in English formed & Lower Certificate.

A. J. James J. L. Robinson

JMB JMB JMB

Lampeter (UCW)

The unthors are principal, lected in charge of overseas student and locurer in linglish at foreign lauguage respectively a Barry College of Purifier Educa-

Doubts and dangers in knowing where all our graduates go

Loter this year we can emper the publication of statistical details of what hopponed to those who grolluoted in 1976 from universities in the United Kingdom. Public interest in the information is, justifiably, great, and when it appears it will be pored over and interpreted by a variety of individuals and organizations, including government denartments and the press. ment denartments and the press. Soch "first designation" infor-

for nearly 20 years, but published number of universities has forcessed, and the great education dehate and its preliminaries have gathered strength. As it happens, recognition of the public senficance of the hydromethic began to widen see about the hime nomely the bagin-hing of the present details—when

TILL AN ARTICLE TILL AN ALES SIN THE THES SUN THE THES

and efficient means of orranging corry in universities, and is necessively a personal process rother that a statistical record.

Those of us who were concerned about the introduction of the USR had o difficult cuso to put. Wa did not feel that auyono was propusing to be careless about confidentiality; indeed, it was eleer from the start that these responsible, ot all levels, were likely to be accupations in safeguording it to en extent which puts the Government's ottlings to official (as distinct from university and other private) computer-held dath to shame.

We did feel that un important

Wo dld feel that un important conceptual error had been made in

Wo dld feel that un important thus in fact they have not. Not only that in fact they have not. Not only that in fact they have not to only the universities grown, has public interest in the output of the universities grown, had the universities grown.

The danger, at we had to life the universities grown, had the universities grown, had the universities grown, had the universities grown.

The danger, at we had to life the universities grown, had the universities grown the university that the universities grown the universities grown the universi

It would be tedlines oud furile to they were doing. Nor has the green the question if circuming use of the information, it structes had remained unchanged, has been seen to become ing use of the information it is has been seen to become including the his been seen to become in the control of the control o

information beared to the present decade wheels in the provided state of the present decade wheels in the provided state of the present decade wheels in the provided state in t

John Durrant discusses the implications of recent attempts to explain human behaviour in terms of models taken from the biological sciences

Sociobiology: closer to myth than to science?

la madern science the olmast bewildering pace of technical end theoretical innovation often masks more fundamosatal and consequently more conduring concerns. This is well illustrated by the recent revival of professional and popular interest in evolutionary social theory. Centred principally on the publication in 1975 of E. O. Wilson's massiva work Sociobiology: The New Synthesis, but also encouraged by last sutuany's extraordinary contraversy over the affairs of the late Sir Cyril Burt, attention has been focused once again on the question of the legitimacy of biogeocic explanations in the social sciences.

In madern science the olmast deriving estimates of filese nlone will settle the whole affair for ever.

Howsver, such estimates have consistently fulled to produce a consensury fulled to pro

sciences.

In a book which has been wittely builed as "one of the landmarks of hiology" Wilson has mode the ambitious claim that, ofter several false starts, coulutional theory is now capable of providing an oll-embracing account of human behaviour. In this account the conventional humanities subjects will take a back seat and instead human marriage customs, moral human marriage customs, moral codes oud so forth will be interpreted as biological functions which have arisen by the natural selection of advantageous genetic mutations.

Surveying the potential of this approach, Wilson reless the passibility that political power and socioeconomic success could be explained, not as the result of divine fiat, still less as a elmple consequence of human struggles, but rather as the inevitable outcome of the different instructions

explained, not es the result of divine fiat, still less as o elimple consequence of human struggles, but rather as the inevitable outcome of the different instructions contained in each person's chronic tones.

It is difficult to fullow the arguments which these cloims hove provoked without the uncomforteble and depressing feeling that two preventations of the "pop-ethological personiations of the "pop-ethological promouncements in men like Hinns-Bytenek, Arthur Jenson and R. J. Herrasiein raised einitiar issues; and carlier salli, disagreements about augunics and "sociol Durwinstound."

In fact ever size the authliants

whites. But there is continuing disogreement as to the meaning and social significance of this result. The key issue here is not physical but metaphysical, or even ideological cal, in character; and in this situa-tion only faith susteins the hops that forther occumulation of data will resolve the problem.

Does this conclusion miss then that there is nothing to be gained by continuing this discussion and that we should observe it as a fruitess—if enjoyable—intellectual pastime? Not at all, Pracissly because of the fundamental noture of the issues which it raises, the dehate on socioblology continues to provide fuel for important arguincuts concerning the neture and stotus of scientific explenetions.

an organized system of "natural knowledge".



The threshold of mon's sociel evolution? A reconstruction of how a bend of early mee may have driven rival predefere from a potential source of food, Drewing by Sorah Landry from E. O. Wilson's Sociobiology: The Naw Synthesis (Harvard University Pross)

to (dubious) sociology — e task which letgely preoccupied many of their predecessors. Instead, they have criticized biology itself by suggesting that such extrapolotions

snggesting that such extrapolotions ore community based again models which elready ombody o great deal of culturel "wisdom".

In this wey, the question of authropomorphism—the projection of human values into nature—has become of central importance. In idoologisal terms, sociobiology is charged with being a highly reactionary discipling which, by tondinually rediscovering contemporary social reality in muture, provides scionaffic justification for the political stains quo.

This problem may be lituationed.

some covered essentially the some ground.

In fact ever since the publication of the Origin of Species in 1859, discussions obout mmi's place in nature have taken o consistent form. At any particular time there has always been a aubstontial number of biologists one sociologists attempting to explain the observant them there can usually be obtained a rather more diffuse body a opinion committed to the east of origin the opinion committed to the east of origin the opinion committed to the east of origin the opinion committed to the east of origin phenomens.

These belanging to the former roup tend to pursue a "reduction of the opinion committed to the east of opinion committed to the ea

the earlier opisodes were themsolves interpreted, then the force of the objection made by the sociology of knowledge becomes immediately

of knowledge becomes immediately apparent; for Dawkins's cutire discussion depends upon on extended anthropomorphic metaphor.

Genos und Their "eurvivalmochines" are seen pursuing all the different forms of "enlightened eolisimess" which were so endlessly onelysed by nollient economiets in the lost cantury. Consequently, the most powerful maly.

conomiets in the lost cantury. Consequently, the most powerful molytical tool of the book is going linery; and animal communities turn oul to be examples of the notural identity of interests."

In a spacial interests. In a spacial interest interest interest. In a spacial interest interest. In a spacial interest. In a spacial interest interest. In a spacial interest interest. In a spacial interest. In a spacial interest. In a spacial interest. In a spacial interest interest interest. In a spacial interest interest

A guide 1. (mis) using educational technology

The following advice to potential users of educational technology is taken from a lecture given by Henry T. Ingle at the Pantificia Universidate Catalica do Rio Grande da Sul in Porto Alegce, Brazil. It is reprinted from the correct issue of Ideas and Action. puddished by the Food and Agricultiare Organization in Rome:

Think technology first; that is, buy the necessary equipment and electronic opporatus first and make sure that they function well. Once this impurtant phase is completed. you con then focus your attention on how the technology will be used.

As a general rule technology in and of itself can do the job. It is aclf-sufficient. It does not nesd much in the way of complement ar support materials and resources. It is powerful enough to genorate tho necessary changes mensly by its introduction and generally without

• Technology can solve ali you problems. Place your trust in it, ever doubt it, Alter all, what can se more indicative of modernity and devolopment than the uso of media

• Master the production tech niques and the operation of tha equipment first. Things such os program objectives, content, and audience needs will come loter as o result of the production tech-niques employed, and with hardly

■ Leave the evaluation of an educa tloool technology project for the last possible minute, and then only do it if time and money permit. Your primary concern in using technology must be tha development of creed to programs and moterials. Don't let artistic inspiration become weakened by scientific rosearch and applies.

what was for Spencor o source of prida is today something of an emberrossment to his successors. In percept, months there her been wide receive, months there her been wide references to "castes"—queens, workers, slaves, ond so on—in enlance socioties, of the genoral tendency to clessify online behaviour as either "similaled and behaviour as either "similaled and behaviour is not your concern.



of all private universities to rea

on government money—tital directly in the form of star appr.

printions, or indirectly in the land

The prublem for privote toller

however, is that the miblic purchus hing strings to it. State applications to denominational tales.

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of church and state-small

colleges are expected to have their state's overall plan lockle

education. Many beliere this will limit their freedom af ather

have refused to accept state mo

direct grants from Washington

cept for spinisured research, 2 federal government money by? historial directly to students in b

form of grants and luguis. But

institution accepting students 23

ing government grants is boudt

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vate rulleges acrept the sudes building grants and the regular that go with them though the grundle about the paperrock to

Some, however, heliere eva to limits their freedam. Bilds Young, the Morano institutes 2

Hinh, has refused to impless the regulations on sex discinization, saying this gues uguing whom principles. And several collections of the collection of the

strutents holding government gas in order to remain intally indes

th the white private collist visuall eather have money and est lations than neither. And they had habitled hard for more public se

Indited hard for more putters; port, Their difficulty, as a cost article in Change magazine point, out, is that they do not have whether to partray themselves strong and flourishing—thus init of the comment "why gross trebred when it doesn't aquest,"—the in emphasize their rolleging appearance—thus suggesting their rolleging appearance—thus suggesting

precurious state - thus suggested it would be a waste of usney to

subjust a system that was about collupse onyway.

Next week; how independent a

Private universities do no rai

research grams.

Pressure stepped up for

shorter study periods

Scientists bid to aid political prisoners

The National Academy of Sciences thus lumiched a compaign for the release of eight scientists in Argentinu, Ucugnay and the Suciet Union who have been imprisoned for poli-

At the Academy's annual meeting lust week 250 idembers agreed in serve as "correspondents", helpin serve as "currespondents, need of support, write letters on their beauty of the letters of their beauty of their

The campaign cames a year after the formation by the Academy of a committee on bundan rights to play wants a committee in the society for the committee wants a commutation of sentence on a mare activist role in protesting Sergei Knyaley who is serving a against the imprisonment of colleagues in other countries.

Sergei Knyaley who is serving a against the imprisonment of colleagues in other countries.

Members of the camminee admitted at a press conference that the cumpalgat could be counter-pradective. But past experience had shawn that it was more effective to speek out than keep silent. "Publicity helps—or at least, it doesn't barm. Silenco kills", said Dr Lipman Bers, from Columbia University.

The eight imprisoned selectives in Perm, it is olso compaigning on both lift of the physicist who was arrested in Perru both lift of the physicist who was arrested in Perru both lift of the physicist who was arrested in Perru both lift of the physicist who was arrested in Perru both lift of the physicist who was arrested in Perru both lift of the physicist who was arrested in Perru both lift of the physicist who was arrested in Perru both lift of the physicist who was arrested in Perru both lift of the physicist who was arrested in Perru bru both lift of the physicist who was arrested in Perru bru both lift of the physicist who was arrested in Perru bru lift of the physicist who was arrested in Perru bru lift of the physicist who was arrested in Perru bru lift of the physicist who was arrested in Perru bru lift of the committee and the physicist who was arrested in Perru bru lift of the physicist who was arrested in Perru bru lift of the physicist who was arrested in Perru bru lift of the physicist who was arrested in Perru bru lift of the physicist who was arrested in Perru bru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the committee and the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift of the physicist who was arrested in Perru lift o

University.

The eight imprisoned selectists include five Argentine physicists who "disappeared" mysteriously lost yeor—Federica Alvarez Rojas, Gabriela Carabelli, Juan Corlos Gallarda, Antonia Miserich and Eddaminia Pasquini.

Scientists ore asking to he allowed to visit them or correspondents to visit them or correspondents.

centrating on Juse Lais Massera, a Communist party member impri-soned last year, Described by the Latin America, he is said to have been severely turnified. The commi-

Scientists are asking to be allowed of academics in the Unit to visit them or correspond with and in countries aversees.

years to the course of his long

Another disadvonuage, the council says, is that the new depart-

eation programmes was delegated to the states, as alght well happen,

The number of papils and sta-dents was not expected to grow.

and tederal interest in charation was our likely in nintch its inture

role in such issues as energy and

Finally, the council says, a sepa-

Carnegie doubts necessity for separate education division

Argument over a separate Depart-mans of Education has not died down although it is clear that the present Department of Realth, Edu-present Department of Realth, Education and Welfare will remain

Opponents at the proposal, which was ordersed by President Curter during the election compaign, are during the election compaign, are now pointing out the disadvantages of spiluting up HEW. They are haping the cerch the sympathatic car of Mr Joseph Califuno, the Secretion and ment, and might spend even less if responsibility for same federal education ment, and might spend even less if

The latest comment on reorganiza-tion has come from the Curnegla Council on Policy Studies in Higher Education. The conocil doubts the teed for a separote Department of Education, and says that it might give more attention to elementary

placing liew with two new mere proposal by the council binate of growth and solders supported by the council by the council binate of growth and council by the council by the council by the council on Under Secretary of and proposal by the council on Under Secretary of and proposal by the council on Under Secretary for Studies, and a Department of Studies within the Health, Education of "work" and including welfar programmes now administrated by HEW.

The council thinks ir would be especially dongernis if a separate deplayment was miscrely of the council of the control of the group. Dr. Gerda deplayment was miscrely of the council on Under Secretary (for the including an Under Secretary (for the including second the council of the programmes of works, and the council of the programmes of works, and the council of the co

Strike college rector

Dr Larkin Kerwin, Rector of Laval
Volversity in Quebec, which went
on strike for the whole of the
autumn term, was soundly beatan
when he stood for reelection for
another five years. The univorsity
chose instead Dr Jean-Guy Paquet,
chose instead Dr Jean-G

In the first of three articles on private colleges, our correspondent looks at the financial difficulties facing them

Public purse has long strings

Princeton, Cornell, Columbia, the they face a bleak forme, University of Chicago—whe coll-call flow bleak, however, is a matter of some argument. Recent studies residies, thus, there are still edge strikes confures up an image of inde-stille edge. have been contradictory; one, for wealthy and theily parents sife. scholarship. Itm the image is not anite accitrides

Scholarship they certainly hody, and same are very old. Ihn that was true in the past. The great universities of Anterica ore muninally priente, but their actual independence" is increasingly a paint of myoment. And many are mor bearily in debr, or struggling io break eren.

Private universities used to be the backbone of American higher education. They still make up the elite texcept for Berkeley, which inalically, is often mistoken for a private iostitution, a confusion phar t does not always seem in a harry bulk of the pation's undergraduates, And their numbers may begin same to fall rapidly. They are, for many reasons, on endangered species. The thrents come from all quarters. The principal one is lack

uf money. University costs have increased for faster than the rate of uflation, and private universities have had to increase tuition fees durply and dig into their reserves. A few years ago things hoked yery serious with even many of the

best-known and largest institutions seriously in delu. Most lanuched massive appeals and printed their indgets rathlessly. The money came in slowly to start with, but philambropy picked up again as the econamile recession eased.

Stanford, New York University faut to be confused with the City University of New York! and Geargetown, for example, are on a attach sounder economic footing nois. Had Calimbla University is still awasomely in delt, and Vale is along \$200m short of its \$370m appeal larget. Even Harvard, muce removined for an embarrassment of removaed for an embarrassment of wealth and still the largest receiver of prirate gifts, does not there much cush to spare.

The recession hars the great re-The recession that the great re-search institutions, but it hart the small private liberal arts rolleges much more. Most of these are in the rast, especially Pennsylvania, New York State, Ohio and the New Bealman states.

A respected New York educa-tional planning holy, the Academy for Educational Development echons that many of these stud olleges cannot now be saved. Abready they are struggling in entral ranugh students to ksep going, and, with the total number of

McGill concern

language edict

pay the price.
Part of the incornainty about the uendence, wealth, antiquity and the American Conneil on Education, suggested that very many calleges were in danger, especially demandrational and single-sex ones in isolated areas. Amother, for the is that the private seriar recognition of dilec-funds from all kinds of dilec-sources—churches, foundation of dustry and rich alumni. Nerent-Association of American Universiless, there is a growing indeed independence and wealth? Maybe ties, on the other hand, found while abung a quarter of the 1,500 primate institutions were probably in great difficulty, in the other three-quarters there was "stability withour stagnation ".

Furthermore, the predicted rapid fall in student numbers has not yet Statistics for show that student numbers in privine colleges rose by about 2 per cent, while the public sector shawed no growth at all.

A few years aga it was said high tuition costs would nut private cal-leges ant of husiness, because the to dispelt. But the days have long gap between the cost of attending passed when they educated the a private and public university was widening. But in this last year most state universities have increatheir fees sharply. Hard-pressed middle-closs students no langer see the state universities as such a harbain-especially if they want to quand one that is not in their home state.

The very high minim fees-prer 57,000 o vent in some cases---the top private universities and do exclude many wellqualified students, but financial



Milchell Tower, University of

Feminists fight for new stress on women in history studies

A group of women historium hus. The philosophical assumption of on French is to be the only official launched a campaign to give more upprouch in history was the language of Queber is deeply morrying to McGill University in Monemplins to the role of women in given dominance of moles and ally, the cannell says, a sepa-lteparation of Filication presignous English-speaking univerthe sandy of history in America, females, Instead, the council suggests role Repartment of Filtration presignous English-speaking universely against of Repartment of Filtration presignous English-speaking universely against of Repartment of

I in roles gonerally reserved for men. lo be sought out and researched

from Lytta Geurge

AMSTERDAM

The universities, already in recalcitorit missal because they are having to whittle down their prohaving to whittle down their prohaving to whittle down their prohaving to mittel down their prohaving to mittel the promote accountable to saciety and sporred on by sheer granmas yet again in the lang tarm if a government advisory committee has its way.

The committee, under Professar R. A. De Moor, saciologist from Tilburg University, has just published to the University of the pipeline for a decude, in the pipeline for a decude where the pipe

if a government invisory that its way.

The committee, under Professar R. A. De Moor, saciologist from Tilburg Univarsity, has just published its latest rapart on tha government's Memorandum an Higher Education in the Futura (THES, Navember 12, 1976).

Tha memorandum has caused a cent saving on the souring univer-sity education bill by cutting university programmes to four years in general. This contrasts sharply with the virtual absence of a time limit students have at present for The memorandum has caused a

Due ta sigrt next year, the programmes have list a lukewarm response from the Da Maar com-

The memorandum has caused a furora in the universities because of its recommendations to gradually replare the binsry system with a unified system af higher education. The universities would lose their present pre-university position.

The De Maor Caumittee recommends that he new faur-year universities are the page faur-year universities. It doobts, far Instance, whether they will in fact yield a saving, as the initial submitting of programmes by facultles for ministarial mends that the new faur-year universities are naw warking should nuiversities are naw working should he ronstructed an credit lines with regular examinations instead of consisting of ane period of unbroken study with an ussessment from start from the universities made it passible for the property of the universities made it passible for the universities are the front the universities made it passible for the universities are the first than the control of the first than the first than the control of the first than the firs sible fur facultles, when compiling

It is argued that the future potential of students and their suitability for courses cauld be more quickly seessed in this woy. Although no rerent figures are available. Professer De Maar said that for certain raurses the success rate was as higher than 45 per cent.

This recontinuadamont, along with the sthers in the report will no is short a report will no is short at the striking.

This recontinuadamoni, along with the sihers in the report will no doubt be considered corefully by Dt Jas ven Kentanade, Education Minister, if he is returned to office after this mainth's general elactions, First established in 1970 the cantimittee has, since 1972, been henvily laysteed by all the continuations. Is hursly striking.

The De Moor epamintee is odeunut in its report than if the abject
of the exercise is not to be defeated of the exercise is not to be defeated courses must remain of four years. Alternative courses for higher education in the long term as recommended by the committee would be split into three distinct but interrelated phases. Two-year foundation courses, with a choice bias towards a more acodemic pr a more practical training for nearly oll subjects would constitute the first phase. Students would then be assassed before entering the second phase of study for a further two years which trouble lood to a first degree. It is envisaged that around 20 percent of exceptionally talented students could then continue for a further three years for a declarate layslved lit ull new developments related to tertiary education. It has, for instanca, warked on plans for an Open University and proposed an apopularly received third form of higher education as an alternative to alghly specialized university to alghly specialized university tourses and higher vocational pro-

students would then the assassed before entering the second phase of study for a further two years which would then to three-year routses more general to personal page and offering nil-round training for a wide range of occupations. In broad terms, like De Moor committee is in favour pf the more committee is offered a further three years for a deciorate or a sharter post-groduate course. The cammittee is ofso against introducing a new Higher Education Statute in adultion to the present Acodemie Statute which now governs subjects for university examination. It recommends instead a Committee for Certificates and Degrees similar to the British Council for National Academic Awords.

Its lasks would include advising the Education Minister on submitted programmes as well as

in the first of the many statement of the ma

interior Minister Prancesch Minister Students that in the feated students and against Mister the incidents, chostened student held assemblies and, despite the would assemblies and, despite the work, and oftan physical, oppositions in hard-core extramists, continues in hard-core extramists students come from exceptive bockgrounds was pointed out by Signor Cossiga who declared that he would no longar allow "the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be willed by the sons of southern peasants to be will be declared. The irony of the fact that mony axtremists students come from extending the provided and provided that he would no longar allow "the sons of southern peasants to be will be will

bing sup said armed struggle was indicate in some say in green and struggle was indicated and social say and solutions. Synolities and solutions are insidered that the surface is also growing imparities were to start talks on an excernent which would give the structure when the struggle was inside and social solutions. Synolities and solutions are inside and social solutions are in the struggle was inside and social solutions. Synolities are solved the structure in most ploces, however, many students erected the AUS concern st innegitary.

There were furthet charges from the twing parties is its. week, however, that the structure of education largely in the structure of classes in the structure of classes in the structure in most ploces, however, many students at universities and colleges of advanced education largely in the structure in most ploces, however, many students at universities and colleges of advanced education largely in the structure of classes but the sufficient with the sufficient will be to advise and assist the structure in most ploces, however, many students at universities and colleges of advanced education largely structure. There were claims at some institute with the structure of covernments in most ploces, however, the structure of covernments at univers

Legal challenge to reforms

Intradured last year by Mme
Alice Saunier-Schté, Serretary of
State for Higher Education, the
second-cycle reform sparked off
mussive murest in the universities
among both students and staff.
Now the action beauties by the second-cycle reform sparked off missive mines in the universities and of same state of missive mines and stalf.

Now, the action brought by the Socialist Similicat General de l'Education Nationale challenges the legal status of the validation branch set up to ver new comes submission. Cutwardly the speal lavolves a quasism of administrative pracedure. Effectivaly, however, it strikas at the heart of Mine Saunler.

Accarding to the National of Saunler.

Saite's whole programme.

Saite's whole programme.

Saite's mine universities and representation of prufessors and representation of the social sclences. The hoards consist of the relevonce for outwardly new but essentially very ancient courses. This is particularly pronounced in the case of public and commercial interaction. For example, the higher diploma in secontancy studies is now served up as a mine such that so after the higher diploma in secontancy studies is now served up as a mine such that so after the higher diploma in secontancy studies is now served up as a mine such that so after the higher diploma in secontancy studies is now served up as a mine such the social sclences. The higher diploma in secontancy studies is now served up as a mine such the social sclences. The higher diploma in second cases or level and claiming of exist or level and claiming of evel and claimi

If the Consul d'Etat upholds this interpretation all the legislation om-

reform in third and fourth-year null Both aspects were regarded as unversity course is threatened by an paloiable by the university world with a rigorous outward compliance appeal to the Conseil albeit, and were seen as an unwarranted with the demands of the Secretary France's highest administrative interference in the "freedom to of State.

Accarding to the Sundient General They are to pronounce on the minite validation bunds infring the guidaline law (lai d'orientation) passad in the aftermeth of May, 1968, which gave each university of teachers from Industry and com-

interpretation all the legislation ombodied in the decree of January, 1976, setting forth the guidelines of the second-cycle reform has two major aspects, the "profassionalization" of the last two yaars of university studies in order ta cquip studants with the skills necassary for Frunce's current interpretation of the second-cycle reform been in the Consail d'Etat assucies a crucial importance. If the decree governing the reform of the second cycle has to be redrafted further the contrary of the hast two yaars of university studies in order ta cquip studants with the skills necassary for Frunce's current to the second-cycle reform been in the Consail d'Etat assucies a crucial importance. If the decree governing the reform of the second cycle has to be redrafted further the legislation of the second cycle has to be redrafted further the contrary of the second cycle has to be redrafted further the legislation of the second cycle has to be redrafted further the legislation of the second cycle has to be redrafted will be night. There is no guarantee on "vacationolization" of higher the second-cycle reform been with the same enhancement.

from Guy Neave manpower needs and the national implemented. To date the oriverd-TARIS validation by boards of new courses ties have adopted the traditional The future of the binerly contented to ensure they conform to this goal, strategy of academic resistance; a

interference in the "freedom to learn" by French husiness

Six hourds have been set up—
three dealing with "fundamental disciplines", one for the exact serious points, of lifth for low and economics of the getrently of State.

The demands of the getrently of state.

studies is now served up as a Moster's degree in the techniques of financial and accountancy

1968, which gave each university of teachers from industry and comparison of t

South Africa

Union strike threat to stop sackings

from John Horgan

Republic of Ireland

DUBLIN The Irish Pederation of University Teuchers is to take Industrial nction in try to prevent the dis-missul of two of its members twho sro on the teaching staff of St Prick's College, Maynooth, This is the first time the federation—which received its negationing licence as a trude union only last year—has decided un such ection to dafand its members.

The two men ore Mr Malachy O'Rourke, a lecturer in French, and Dr P. J. McGrath, professor of logic and general metsphyaics, what is a priest. Mr O'Rourke is a formor

IFUT comes under several head-

tinua teaching. In the cese of Pro-fessor McGrath the bisbops allege that bo has become unsuitable for a teaching post because of a dates for the priasthood.

Maynooth t imboly dispute

Australia Students cool on boycott call

Black medical school nears completion

from Martin Feinsteln South Aftica's first Block medical school and on nudle-visual "dodi-yourself" onliversity ore expected to

in operation next year, The Medical University of South Africa, Mediutso, being built near Pretorio, is due to enrol its first Black students early in 1978. The university's dentoi and veterinary schools are expected to open in

Until now, only tightly limited modical training has been onen to Blacks at the universities of the Witwaters and and Durban. Modunso, situnted near the larga Garankuwa Hospital. 35 kilomoires from Protoria, will have the backing of established madical faculties in Johannesburg and Pretoria.

nomic organization and menage-ment, and ta provide relevant manegerial troining for the increos-Ing number of posts in Comecon organizations, standing committees, research centres, joint enterprises and banks.





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The role of mathematics

fort. Reading and writing have been considered as desirable skills by virtually all civilized societies, and are indeed often identified with cultural octivities. Mathematics, in contrast, has remained an aptional extra; a failure to read or write can bo a source of neute embarrassment but a fallure to achieve mathematics. O level can be flaunted with pride.

The ambiguous role of mathema-tics in modern culture is reflected in confusion over its status in the educational correction. For at this level mathematics is faced with two separate—and often competing—damands. On the one hand, there is the broad educational objective is the broad educational objective of developing a basic level of muthe-nuticol literacy in the population, troiding the individual in those mathematical skills which he m sho is likely to encounter in ordinary life. On the other hand, there is the growing demond for specific types of marheomical techniques in wide range of productive activi

In the obstruct one might be considered merely as an extension of the other, and a hasic grounding in mathematical skills as the foothills which need to be crussed be-fore scaling the more difficult heights. In practice, limited re-sources and different objectives can lead to conflict.

Much of the disenchantment with the "new mathematics" taught in schools has come not from tonchors, pupils or parents, but from employers whose needs are gented to more canventional mathematical skills. Similarly the current shortage of mathematics teachers by ago of mathematics teachers in ago of mathematics teachers in schools is itself partly the result of a period it the mid-1960s when the limited output of university mathematics grainates were eagerly snapped up by industry out research lastitutions—often into odministrativo or monugerial positions—and teaching offered few temptolions.

ilsh and history—and even pure science—lo which the educational system is ablo to mointain stan-

an instribility whose result has been a falling agirol in the stondards of both teachers and taught.

ulteringlye is no mathematics teachforms of literacy are as important—if not more so—than purely mathematical skills have a strong

All of these result in scepicism as to whether making mathematics the priority subject in teacher training—as has been demanded in recent weeks by a number of prominent mathematicaticinus, including Dr Edwin Kerr and Damo Kathleen Ollecoshaw—will of itself provide a mugic panacea in noything but the most limited sense. For the problem is deeper than one of teacher supply, extending to o range of There were in both courses very supply, extending to a range of There were in both courses very issues concerned with the complex occasional departures from conventorms of industrial societies and thousand wisdom (for example, E221

inalizably based forms of onalysis has not begun to turn into n self-reproducing fetish—as illustrated for exomple, by the funtosles of futorclogists such as Herman Kalin (pago 18)—which not only absorbs volumble mothemotical talent hut also serves to mystly such talant in a way which can only be socially harmful. Cartainly there are areas of economics and introduction of mothematics initially introduction of mothematics initially one of mothematics initially of view would be strongly expressed. That these points of view should subsequently led to the creotion of sociol illeus which govern half the population of the world is plain daft.

corch lastitutions—often into odilaistrativo or monugerial posiious—and teoching offered few
emptoilons.

Thus unlike subjects such as Engish and history—and even pure
iclence—lo which the educational
to treat people on numbers conto treat people of numbers con lave both administrative and political enuveulence; it is a tendency against which education must continue to provide an outleder.

College roars and whispers.

The protosts against the proposals for reorganization of teacher training lu Englond are a whisper compared with the rear which has greeted their Scottish equivalent. Alroudy these proposals have been defeated in the Scottish Grand Committee and in an adjournment debate in the House of Commons and there are threats of a vote of the bate in the House of Commons and there are threats of a vote of no confidence if Mr Hruce Millan, secretary of state for Scotland, does not come un with some substantial changes when he announces the final plan shortly. Nothing oppositioning this has greeted, itto plan for colleges in England.

One rosson is undountedly the two more is not the way to go more songlity to make songlity

new isonalitylty of MPs of ell parties, shout fit. There suggestion that not happons north of his happons north of his outs are no coled has force. In the outs are not college are basing their reasons too. The strength of local properties and no major section of Scotiand is position if they are closed find the property. Whola communities have a follage in reaction of Scotiand is a greator, it appears. Whola communities have a follage to register it seems to the college are basing their reasons the section of Scotians noted to compared with that appears which have a follage to register it so of scotians of the college are basing their not seem of England will look crowded compared with that the section of Scotians and the college are basing their not seem of the parties of the properties are provided to register in such facetilities and as a teacher in such faculties and departments lends me to the follage to register is solection. Only stream of the past have a contract and the past have a contract and the contract of the properties of the contract of the past have a contract o

LETTERS TO THE EDITOR

Bias at the OU

Sir,—I not glad that Mr Macdonold-Ross agrees that some (unspecified) pontification on the questions of Open University courses being all political bias and academic standards in the Open University's Ross agrees that some (unspecified)
Open University courses bear all
the signs of Marxist blus (THES the signs of Marxist blus (THES April 29), I am only sorry that his letter which was obviously destined for the Daily Express inadvortently found its way into your columns.

a falling apirol in the stondards of both teachers and taught.

The structural dynamics of this problem make it difficult to identify obvious scapogoats. Unlessed far lowering entrance requirements if the olternative is no students; schoole are not to be blanted far compleying burely qualities field mathematics teachers if the alternative is no mathematics teachers if the alternative is no mathematics teachers. unnegunists for all current points Let us look clearly at the question

of bias. To some pouple blas means mere mention but to most of us it means giving undue prointnence or unfair advantage. When Gerry Fowler left rise Open University to become minister of higher oduca-

some of their ideological and caltural aspects.

It could, for example, be questinned whether the pursuit of
numerical data and of matheinatically based forms of onalysis
has not begun to turn into a self-

dispute, nalike so many others, may ho settled once and for all. May lto settled once and for all. May I suggest, under the auspices of the THES, n "wolgh to". A sultable partel (moybe chair: Boroness Wootton; inembers: Rhudes Roysnn, Max Beloff, Peter Townsend, Bill Toylor, Clemont Froud perhops) chuld vate an each Opon University unit for blao and then they could be welghed. Eric Robinson and Antony Flew could be the Check Weighmen and os people say at the cod of the day we would, by a process of aggregation, arrive at the truth.

at the truth.

Let us now examina the second soutence of Mr Macdonald-Ross's absurd missive in which he suggests that ideas which are rejected by the bailet box should not be studied in universities. My goodness it would have been oven more difficult for Chiumbus, Coparnicue, Galilee, Kepler, Darwin, Pasteur, Paraday, Edison, Hoisenborg, Godd, Einstein to name but a lot and their ilk if to name but a lot and their ilk if they were compelled to subnir their hypotheses to rhe populace before developing them.

and the state of t

dords in the Open University's courses, little has been written from the viewpuint of the pruducts'

consumer. May I therefore, as a student of the university from its inception, now registered with ot my own expense for pasigradu-ate research, offer o few observetions an the current controvorsy I think it is beyond question that minority of course-toam members three non-technical have on occusion ollowed their personal enchusiasms for uspects of Marxist and feminist thinking to bias unwarrantably their presentation of social issues, and it is noteworthy how rapidly the university

imbalances. Significantly, first raised quite recently in the university'o own newspaper, une of the many feedback opportunities which it has always been at puins to provide, for Open University students and part-time staff have always been constantly requested to criticize the content and presen-

Mombers of the academic pantheon may not be well acquainted with their students, but the latter have lost an opportunities of assessing their menturs on television and radio, in summer schools and weekend seminurs, and also from their publications. We have long komwn who is red mil who is dead, making

who is red mil who is dead, making due ollowance for each; most of this specious propagandizing has therefore been counter-productive.

It should not, however, be assumed that o known hias must necessarily invalidate an acculentic's work. Arnold Kettle's literary perceptions hove ling been twidely valued in student checks absulte the simple counters which could have seen the counters which could have seen counters which is not a contention to which I would disseen.

The CUA group did not text is a fur into uncharted territory of two counters which I would disseen.

The CUA group did not text is a fur into uncharted territory of two counters which I would disseen.

The CUA group did not text is a fur into uncharted territory of two counters which I would disseen.

It is countered territory of the counter of the work. Arnold Kettle's literary perceptions hove lung been widely
valuad in student circles, despite
lito propensity of non-Marxist autitude to bring him rather readily to
lito boll. There is, though, a plethora of uthan ethanomethodological
liminaries in the faculty of educathan many selam progration (argelios)

81 constitutes which could have see
stress should be beginning by
are. In addition we need
certed to point out that the pilem at the decline would be exit
but announced to the faculty of education many selam progrations (argelios)

82 constitutes which could have see
stress should be beginning to certed to point out that the pilem at the decline would have see
certed to point out that the pilem at the decline would be exit
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but on the pilem at the pilem at the decline would be exit
but on the pilem at the pithat upon whom practising teachers tend to lank less khally.

Acodemic critics of Open University course material sometimes seem ru evaluate this partly in terms of is putotive import upon their own, natury teorage, students and to furgut that the Open University has a different, adult constituency, mentally more raises and highly possess to make the metally more raises and highly possess to make the metall in the edited to constitue of the constituency of the metallic tn attything onvotting uf Impoctrination.

It therefore seems ilnubiful, in say the least, whether the academic standarde at the Open University hove been in any way adversely offected by the admittedly deplerable attempts of a minority of evangelistic ocademics to mingle indoctrination with education. Yours faithfully,

GORDON MILLINGTON. Grange Rood, Guildford, Surrey

Sir,—In your editurial "Academic Standardo at OU" (THES, April 22) you welcome the decision of the Open University Senate to Institute an inquiry into the alleged bias of some of its courses, I would like to ack whether you and Mrs Caroline Cox and Professor Julius Gould would publicly support a Mr Macdoneid-Ross has a confi-dence le the overpowering efficacy; call I om prepared to make that universial Industrial Ills

Future student

to permit a very drastic teha

in student numbers in edvaced in student numbers in edvaced in the reducation which politicity felt to be unlikely.

In the fullowing week was parted an address to the Greekeerch and Advisory Center to the Care to the Care

ference by Professor Bill Guard

who suggested that in the ga

ably be ulmut the same she kin

cost the future is by the Assessing of University Truthers 1785 April 22) which suggests a good

which you published but the for cust of 330,000 in 1981-82 libble

cust of 330,000 in 1981-52 than the figure of opproximals 295,100 (5 per cent growth bears 1977-78 and 1980-81 only ossumed 1977-78 figure of the control of the figure of the control of the control of the control of the control of the customers of the customers and the customers of the customer

group projections were producted group projections were producted complete isolation from one angle, noither knowing that another may was in being. The most important development that could come of those two exercises is the arrival of the new machinery and

tion of the new machinery cale for in the CUA group's interior port to review annually the life

Chalrman, CUA group on inrecasting and

Would a transplant of the Brookings Institution model to British take"? What is the Brookings model? Sir, Your readers could be to given for being confused by the thora of apparently controlly forecasts af the likely size of his to recusts at the likely size of hise education, and particularly the toversity sector, in the future his not possible in the space of a log to set unt the detailed argument for the various points of new perhaps os the Conference University Administrators' group was for in the field I may be permissed. in the field I may be permited make a few general comment by on what has appeared in the IRO You were kind enough to sit considerable coverage to the of

ings institution in the Brookings model?

Brookings has three essential heates. It deals with economic und serial policy; it analyses issues of governmental arganization, and it examined military and foreign politics. It conducts scuninars, usually soparately for politicians, business leaders, union afficials and government bureaucrats. A fairly permanent, regular full-time staff is tupplamented by a group of usually younger scholars who come lar shart stays.

It is daminated by economists, although obviously political scientists are important in the last two groups. It is an independent research organization (it also served in its beginning days as a PhD awarding intritution); it has a basic endowment, aceks foundation funds, and alto has government contracts. It is located in Washingon, DC.

The 50-year-nid Brookings has not always had its present acclaim. In this 1940s and 1950s Brookings was ruther fame after a flourishing or provided in the early 1930s, particularly aloc to its studies of the distribution of income and productive examples in the carty 1930s, particularly aloc to its studies of the distribution of income and productive examples in the carty 1930s, it particularly shone in the Nixan years when it was essentially what was termed "a government in exile". group's interim report (1984)
April 1). We were careful as a
make a forecast of future same
to the university secret, but wisel
four pussible alternative pustions up to 1993. In geom inever, we favoured a their wise
showed an increase in sales. showed an increase in soling to 1983-84 (low projectivity to 1982-90 (high projection) E. d. We felt that the lover policies were probably more realist. It only way the decline will be received would be for some

what was termed "a government in The Johnson connomists left the gorernment and were increasingly critical of the later Johoson years, and certainly the Nixon policies. In this recent period Brookings guined be consistent in the recent period Brookings guined brond "macrn" concernt as well be consistent in the consistent in the

The Brookings occlievement has to be viewed in the context of the spetial circumstances in while grookings has operated in the spetial circumstances in while grookings has operated in the spetial circumstances in while grookings has operated in the special circumstances in while grookings has operated in the special circumstances in while grookings has operated in the special circumstances in while grookings has operated in the special circumstances in while grookings has operated in the special circumstance. to be viewed in the context of the special circumstances in which growings has operated to the past 15 years. The early 1960s saw the emergence in the United States of a visible Keynerian growth policy; the apparent success of Robert Muchamara in the Defense Dopartment and to the complete the success of the complete the success of the complete the success of the complete the comp

Namera in the Defense Dopartment led to the emphasis throughout the government of systems analysis, PPBS and cost-benefit analyses; and the "Great Society" slogan was expressed in, an explosion of unterted sotial programores.

And even before the disagreements over the Victorian War, the 20-year Cold War entisensus was breaking up. To general, the uge of the economist had come to Washington; while previously lawyers knild ominated in many federal departments, now economists were illeminated vishaping policy.

Environments and o cearch for randomality

was the ascendancy of the Nixon sor the ascentiarcy of the Nixon goverament and its innve ugainst the kenacy-Johnson policies. The Mixon government out only uttacked the Democratic Party in its policies, but a whole intellectual segment was now out of power.

A special feature of the American teene is that may not the Remission.

A special feature of the American teene is that many of the Broukings people were not only consultants in sovernment in the Johnson years and earlier, but actually wielded lower, whether as director of the Bureau of the Budget in the cape of Charles Schultze (now back in Everamont as head of President Carter's Council of Economic Advisors), or as assistant secretary for bolicy planning in Health, Education and Welfare, which was Alice living pooliton after sho left and the returned to Brookings. (She langtant of the local the new and langtant Congressional Budget Mike.)

University connections

Another special feature of the withington seems is that the city ark a major university (although the three main local ones have improved. the three main local onos havo improved a good deal la recent years). It is in the Washington chain of large policy formation as woll as large contrast Britain, like many large in terms of the geographic least in terms of the geographic least life (Oxbridge is in the Longuette) large policy in ways that New York, law ley are not in Wushington's), law layer life is very much useded compeliors und cecently.

In the United Slates federal government, there is an important level of office, there is an important level. oment, there is an important level the Serretarico of State, IIEW,

Miller discusses the achievement of the Brookings Institution members of Congress, and the perminent civil service. This is the level of assistant oud deputy assistant secretaries who head divisioos of o department.

ment contract ond telling the issues of value and choice ore contract ond telling the issues of value and choice or contract ond telling the issues of value and choice or contract ond telling the issues of value and choice or contract of value and choice or contract ond telling the issues of value and choice or contract ond telling the issues of value and the value and the issues of value and the value a staff—ontably Arthur Okun, former head of Johnson's Conneil of Economic Advisors—do issue starements on short-term cyclical trends and desirable governmental policy changes. of o department,

While they are frequently chosen for their political connexious, there is a foir surinkling of what political scientist Robort Dalil has called "toohalpols", experts with political sensibilities. It is this role which has been ossumed by many Brookings staff, in and out of government.

What are the Brnokings ochiovements? In line with my concern with economic and social policy, these seem to be mainly throe, but othors obviously would recognize quits different successes.

The one that perhaps received the most attention consisted of the

Next month the Social Science Research Council is to

consider a report on the development of policy studies,

which may include proposals for a new institute. Michael

Middle-term objectives

Brookings porticularly raises issues which have middle and long-term possibilities. For exemple, Pechnion corried out an analysis o Pechnion corried out an analysis of the social security programme which would have involved a large-scale change, ona which was obviously not on the inmediate pullticul agenda, if on any.

Brookings has engaged in few evaluation studies; the now Urbon Institute has done much more, and I am not aware to what execut the The one that perhaps received the most attention consisted of the onnual hadget analyses that Brookings produced undor Schultze and Rivlin. They outlined alternativa ways of pursuing national gaols and were an effort to bring thgether dain in woys that the Office of Budget and Management itself had not done. To some extent these

Institute has done much more, and I am not aware to what extent the eschewing of evaluation was a deliberate Brookings policy.

The Brookings perspective can be described as short-term in dealing with momentary and fiscal "macro" policy concerned with inflation and

brond "macrn" concernt as well as more specifically "micro" ones. usual short-term perspective.

Brookings, then, has had a varied history over its long lifa (for a

tary strength oppoared to be wunling.

Insiders and ex-insiders were important here, and the nation of un informed counter-analysis of what was necessary for effective what was necessary for effective milliary strength was very much needed, and supplied to some extent by Brookings. With languram exceptions, o fairly acceptable, le, non-Pentagon, establishment outlook on inditary expenditures was provided.

A third important accumplishment A third important accumpts haven to the tax studies pursued by Jaseph Pechanan. He had long tried to analyse, and later was successful in garnering, the data to illscorn who bore the lax burdens. He has constantly advocated important tax reforms, most of which wors not adapted, but are treated as possible legislative proposals, as they are agale in the Carter administration.

Those making the Bronkloga studies are very shrewd people; many bave had extensive govern-

many bave had extensive government professional credentals; they are marked also by on effort to regard thamselves, and be regarded as hard-headed and rational people. They had a definite policies.

They are marked also by on effort to regard thamselves, and be regarded as hard-headed and rational people. They had a definite policies other dealer is for more systematic, rational thought nbout government decision produce new ldess? Profiably. Would be shook up troditional Whitehall? That is more dubious, for the capacity of bureaucrorles to absorb shock is extraordinary. Would it produce groster "rationality" in government decisions? That is very doubtful.

That problems focing Britain are only partly tachnocratic or "rational" to terms of developing specific ideas to deal with sp

sing of the consequences of policy—though one as strongly as I would have not as strongly as I would close of expand processor and on organization can do and for the aced to have study, the concern should reacher be left.

One hardly ever reade oow a of the would close of an ovaluation of the concerns alouid reacher be now in the would close of an ovaluation of the read to the would have not expect the left.

One hardly ever reade oow a new policy in the sort the would have not on the study, the concern should reacher be left.

One hardly ever reade oow a new policy to the concentual to a would reacher on.

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growtk, and middle-term in regard to programmatic directions in HEW, Lobour and Defeoce. It is not tied to smoll-scalo improvements lo existing progrommes as in the

research institute), its grearest pluuilis aro relatively receut; and hey emerge from the particularities of the American scene, the nature of federal government with the possibility of swingling in and out of the adudnistrative at reclaminal level, and the particular political circumstances from the mid-1960s ou, when poolile were increasingly critical of government activity. A care of people existed who had

governmental exteriorce and a fairly clear idenlogy; they were politically and odministratively practical and knowledgenbie; they maintained continuing ties with government, buth with politicious (legislatara and aspiring presidential) (legislutara mil aspiring presidential candidates) and the pertannent civil service, mid knew how to wed economic expertise to policy queorions.

The argument for the British Brookings accuss to bu two-fold. There is need for a circulation of the elite—in this cose of the White-hall and academic elites—moving and cost or the others. hall and academic elites-moving out of each other's orbits. The

other dealer is for more systematic, rational thought about government

people. They had a definite polar of view about policies acciding growth and equity. They were coocerned with fairness, that people in similar situations should not be treated dissimilarly, and aboy did pay some attention to the distributive concequences of policy—though they concequence of an ovaluation of them.

There is a allsturbing consensus that country at the elements of a programme, we have to begin to understand which elements of a programme have some elements of a programme have a consensual programme, we have to begin to understand which elements of a programme have some usefulness while other components may not.

Rathor than the naive notion that the country at the concern discussion of an ovaluation of the concern discuss of an ovaluation of the concern discuss of the concern discuss of an ovaluation of the concern discuss of the concern discuss

devices ore severely limited.

As William Gorham, who was brought in by President Johnson to organize the mammoth HEW agency into a more varioual state, and now heads the Urbon Institute, wrote in an important article on the koife that cuts the public plo, the difficulty in meking choices of this kind is that we ore deeling with incommensurates. How does one choose between a youth programme or a programme to benefit the eged? That is a question of values rather than of economic calculus.

Where competing values are in-

Where competing values are in-volved - ns Gurhaut learnt - no volved—as Gurhaut learnt—no economic criterion can help ono make the chaice. One should not look towards a British Brookings as rationally making cuts in the budget, but us possibly pointing up what the effects of the cuta might be. That would help thinking obout the least to but cortainly graphs have been bud cortainly graphs. the Issue, but certainly would not depoliticize the issue nor provide a "scientific" basis fur making the cuts. The issue would still be political and ideological.

A Whitehall exposure might be beneficial for academics. The dangers are that they might just take over the ideology of the institution they are working in, or would merely impose their traditional expertise on whatever they are doing without paying attention to immediate eircumstances. diate elecumstancas.

Obviously, the assumption is that some contact with the outside will make people aware that there are immediate circumstances which have to be considered in thinking have to he fonsinered in munsing hoth theoretically and analytically. This would be an important ofer for many academics, aspecially neocinssically minied economists, though more British university economists have hed this experience than seems to be realized.

Assuming that there are family for policy-oriented social science resourch, whot should be alono? Business us well as governmental policies should be studied. What imposs in companies la the unknown black box in the clinia of governmental actions to offect the objustiff condens.

governmental actions to offect the obtaining economy.

Disoilent ideas should be encouraged. Exciting developments are occurring in Morxist ecounoiles and in the new whan occloingy which ore not entering into the United Kingdom public debate. Many sucial scientists, let alone odministrators, are unaware of those developments. French administrators and mass media know much more about what is develop-ing among non-establishment social

There is need for greater open-nass to carefully assaying theae ideas and furthering their develop-ment. A left-wing institute of policy studies is an important Washington ceorro; there is no counterpart in

this country.

A particular kind of avaiuation studies is needed in which it is possibilities discover what uspects of a programme are effective or ineffective and why. Rether than having global assessments of "go" or "no

Is Brookings the right model for Britain? shaping of chinking about policy issues which are approaching the front burner, rather than concentrating on the development of a very specific policy for a very narrow or immediately current issue. Perhaps a third of new policy research expenditures should be unlammediate issues (including cyclleal policies mialyses and evaluation), for without a fairly immediate payoff any research agency will incur great resentment. It is also good for a research agency to have experience with immediate issues.

No more than 10 per cont might

perience with Immediate issues.

No more than 10 per cent might be devoted to long-torm activities, where the objective should be to discern the likely trends and consequences of current activities and to broaden public discussion of oltomotive lines of dovelopment rather than the frequently specious and useless "long-term planning" that occurs. A major part of energy alrould be devoted to middle-term notivities, ncti vitles.

The growth in public policy on alysis requires a great growth in that; in order to make effective public policy analyses, it will be important to collect much more demitted data on a whole vorlety of subjects that now account to a subject to the control of the subjects than now occurs. It will mut be useful only to fund re-searchers unless there is an en-richment of government production

In the opposite direction, a group like the Diomond Commission on the distribution of income and wealth, which is producing very interesting information, should have a policy oriemotion, broadening the discussion of distributive pussibilities. If on "justitute of lostitutes" is

nation of the top among the varied London institutions should be less emphasized in invour of increasin the interaction among the staffs of these institutions.

There night he some projects which are done jointly by staffs of different institutes, juint meetings f the institutes and the like. Fund ncentive for joint work, rather than having a broad structure which does not seen down to the operating

Staffing problems

With o wholly new lustifute or ao institute of institutes", The crucial question will be the stoff. We are not dealing with an unidentifiable paparation in the United Kingdom, but with a very antrow group of social ocientists—not just economists. misto. Are there enough goud noopla available? Con they be developed? Probably, but a more specific analysis is needed than now

It is important to have some people who have a passion for no ideo, who are not only technicians. For example, Charles Schultze has been influential in emphasizing that importance of providing incontives for desired goale rather than continuing policies which frequently produce disincentives. He obviously has a passion for this idea and as a result is very convincing about it.

Technique is insufficient. How to
develop passion and precision, sen-

develop passion and pracision, sen-sitivity and rigour, a concern with the concrete in theory and the theory in the concrete, will be very important. Where Brooklogs has been deficient; and a similar situa-tion de fikely to weaken other policy-oriented institutions, is in dovelop-ing theory out of its practical ox-perlences. This should be a cancern of ao instituto in the United

dom,

I do not arguo against a British
Brookings as such. I do argue
against having unwarranted expsctations of what such an organization
and do and for the need to have



BOOKS

A social science fiction

The Next 200 Years by Herman Kahn, William Brown and Leon Martel Associated Business Progrummes, £5.95

world is nigh, it is not the predictinns of futurologiats but the gullibility with which large, and often bility with which large, and often important, secons of the public ewallow their pronouncements. The errivol in Britoln of the great Pro- to look for more erudite than they fessor Herman Kalin was greeted by a special "Profile" in The 500 to the tendency invaridation of the kind on whom businessmen of the kind on whom businessmen of the kind on whom the first tendency invariant thin in the say, is known as "the Ricarda effect". Well, it may be known as that to Herman Kalin and the say of the kind on whom the say of the kind on whom the say of the kind of the say of the say of the kind of the kind of the say of the sa -so they tell us-Briton's revival his colleagues, but not to unybody depends, to pay not £60.00 each for the privilego of being oble to sit at his feet and absorb his message. And there is no doubt that his reputation as a great intellect (page The Times's "Profile") end us a clair-voyant will not be in the least oges one's fulth in their ability even tornished by his latest book in spite in get their sums right—is a Times's "Profile") end as a clairof the fact that, in addition to its simple arithmetical mistake in the basic weaknesses, it contoins beautiful examples of sloppiness, ignorance and downright mistakes of an elementary kind.

One of the most hilarinus is where he refers to me as having stated that "civilization has falled because lils (i e, my) uncle forgot to invent 'Beckermmium'". Here, u the space of one line of print, he manages to make four untright

mistakes.

First, I did not say that civilization has failed; quite the opposite. Second, I did not say that anyhody "forgot" to invent the metul Beckermonium. Can one "forget" to invent things? Are people going around making excuses for themselres by saying "Oh, bother I I meunt to lavent the telephana this morning but completely forgot obout it". Third, I never mentioned my uncle at all; it was my grandfather that I had referred to. It is perfocily irme that my uncle also failed to invent Beckermonfum; so did my aunt and so did the whole family for that matter. They were not a very inventive family. But they ny aunt and so did the whole family for that matter. They were not n vory inventive family. But they were not particularly absentminded as far as I know, and not one of them—fet alone tha whole family—"forgot" to invent anything. Finally, I naver mentioned "Invapting" in the first place. I used the tarm "diacover", and loventing and discovering are only used the tarm "dlacover", and loventing and discovering are quite different activities.

Now you may say " why the may bother about mistakes which have no bearing on the argument? is true that they have no direct bearing on the argument, but why should one trust Kuhn and his col-leagues to be able to succeed in the superhuman task of predicting the If there is one thing that convinces future when they cannot even get me that, after oil, the end of the simple things right like accurately reporting one line of what I have

And it is not as if this is no lsn-

tions for the world in 200 years time is that population will be 15 billion, per capita output will be 520,000, and so total world output will be 520,000, and so total world output will be 5300 trillion. They then disarmingly add that their population extinote is "give or take a factor of two" which does not suited much fan what they mean by this is that you could divide their projection by two or multiply it by two, which gives o range of four two, which gives o range of four to one. And their projection of per capita autput 15, they say, give or take a factor of three ond their total world output projection is. or taken nutput 15, they say, give on taken factor of three and their lotol world output projection is, they say, give or take a factor of five (implying a range of 25 to ono). But they have got the arithmetic pring (at least in the absence of some reason why their model rules tout the following combination). For applying their "give or toke" factor to per capita nutput, gives a range of from \$6,666 per hoad to \$60,000 per head, which, if combined with their tapper onli loiver limits for population, gives a range for total world output of from \$50 trillion to \$1,800 trillion, and not from \$60 trillion to \$1,500 trillion as is implied in their statement that their total world output projections of \$300 trillion is "give or take" a factor of five.

In short, the top of the world outpur range is 36 times as great os the bottom of the range! Even had their arithmetic been correct,



Professor Herman Kalm-whizzkid and tild Testament prophet?

in other words, even had the study been produced by outhors who seemed mure efficient at avoiding alapto errors, of who possible interest is to know that world output in 200 yours' time might be \$60 trillion, but then, again, it might be 25 times as great?

The most honest justification for

their own range of 25 to one is second to make one oak whot is the constraints of time. In primitive societies this public need for forcests was provided by outhors who second many efficient at available doctors could take up by estraints. doctura, and later un by astrologists (who still do a good trade I believe).

But, in the same way that every-thing has hecome empirically so the long-term prediction husbiess in-evitubly become dominated by those who can hest present on image of finitivology fs, presumobly, that mon-kind has always been foacinated by the notion of seeing into the futuro. Claims that this can be done, thare-foro, pander to a public need; they

ranges of error ore attached to hardly be expected to satisfy the widespread desire for the illus-that the future can be foreak

And what else does the fit and associates book provided to contains a firm and up-to-die that the contains to growing the contains. Here the contains and hardly required the assistant of a whole research institute and as the Hunfson Institute.

It also contains some observed

It also contains some than tions on the various acciel problem to which society—at less less more advanced countries—it sked prone. And although these adversed up to look like presson of future trends, in reality there merely new woys of painting if time of the present rater in imaginative insights into the face. Genuine science fiction constitutes Genuine science fiction could be more creative ideas conceined possible structure of some ideas future than any of the beautifuture than any of the second secon fiction that the futurological to offer. Nowhere in the late there any concrete illustrated the troy that the sort of page of our existing social po Yet the claim that the folia;

gists make for their settings; precisely that it would have a influence on current defer otherwise who cares what we output would be like to 200 jet output would be like in 200 get time? Now, suppose that see did come up with some after to, say, the problem of welviolence, or the Middle Earst flict, or industrial relations be mybody believe that the solder would have to be modified if the suddenly rushed into the assaying that he had just resield world output was, after all by world output was, ofter all tween \$70 trillion and \$2,000

Kahn has also defended for large on the grounds that perint the future is "fint". At it may be so for him and its been a production a long time.)

In may be so for him and its been a production a long time.)

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In her fina

Wilfred Beckerma



A still from the animoted film of Animal Form mode in 1954 by John thus and Joy Batchelor in Great Britain. From Full Length Animated Feature Films, which describes the history as well as the technique and evolution of different animalion methods. Written by Brano Edero and published by Focal Press at £13.50.

Managing childbirth

ing childhirth is grunding fast, Jean Donnison's book on the practifloners of the art necessarily schieves a trendy note, the fact it s a rersion of her doctoral thesis,

book does not throw unch light on Second, what of the doguts that

Before the seventeenth century the care of women in childbirth tened with the midwife: midthiery itself was a non-medical creft those practice by unite autside the damain of medicine, medical tribbles and fraling and medical corporate con-rol. Today about the reverse is the While the majority of deli-ties (while the majority or in-the whosa)) are still attended by theires, midwifery on an occupahis o very specific form of the focusing on argonizational fee. Thus the fallure of the first to form a sufficiently pressure grown a sufficiently

Midwhes end Medicol Men: A History of Inter-Professional Rivalvies and Women's Rights by Jean Donnison
Indemaon Edurational, £6.50
ISBN 0-435-32250-8

As interest in methods of management and the various attempts from 1890 on to pass a lift that would loy down the basis for a national organization of midwives.

were not in common English usage until the second and third decades of the nineteenth century the du-**Batual" versus "minimal" of the nineteenth century; the dubirds. Certololy, there must be connexion between telest is done to
broken between telest is done to
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b lamediacly clear, Jean Dunnison's class hedrooms of the country.

his grey area, but it is a valuable men mak over because they did it documentation of the shifting relationships between runions interest the structure of childbirth manage, the structure of childbirth manage, the structure of childbirth manage, the main in Brirola types subject to produce the mole midwives possessed to achieve successful delivery in achieve successful delivery derived more from their status as men than from the techniques they precised. This ruises a further issue—that of underlying idealogies whose practice loy unite anside the damain of inclicine, medical inclination, medical radiality and medical corporate control. Today almost the reverse is the like majority of delimines twhether domiciliary or included in the second of the as no permit such techniques as vaginal examination, tPerhaps the avoidance of physical contact placed a premium on that most involred technique—inreeps delivery?)

a source group is odduced a factor exploining their dectiso is the decreosing power of the old midwife-licensing the the components of the old midwife-licensing the the components of the old midwife-licensing the the components of the old midwife-licensing on the whole preoccupied with the cense of female midwifery, being on the whole preoccupied with the clamploning women's representation in mure prestiginus aroas of the old midwife-licensing on the whole preoccupied with the cense of female preoccupied with the cense of the old midwifery, being on the whole preoccupied with the cense of female midwifery. Most recently, as been interpreted as meant that the preoccupied with the cense of female midwifery. Most recently, as the control of the control of the control of the cense of female midwifery. It will be interesting, as Jean Bomoson the control of the control of the control of the cense of female midwifery. It will be interesting, as Jean Bomoson the control of the control of the control of the cense of female midwifery. It will be interesting, as Jean Bomoson the control of the co

After Piaget

Piaget, Psychology and Education edited by Ved P. Varma and Phillip Williams Dudder & Stoughton, £7.50

Plager, Psychology and Education is a collection of papers by distinguished psychologists written in honour of Jean Piager's eighricile whose primary interests ore educational. The papers are relatively hrief and discuss a range of conlempornry issues.

A most terealing paper is E.

A most revealing paper is E. Jomes Anthony's on emptions and littelligence which considers Pluget's scattered remarks on the role of offect and his attempt, to help together intelligence and the ento-tions. It is probably not generally appreciated that Plaget recognized basis for a nutional organization of midurines.

Perhans partly because of this emphasis on the background to the 1902 Midwires' Act, certain crucial questions remoin masked. As (female) midwifory came progressively mider attack, another accupation—that of abstetrician—emerged for the first date. The terms abstetrics and abstetrician maked abstetrician in common English usage. not have any affective data comparable to his cagalive data but Anthony argues that in the course of Plagerian results a clinically

> The papers in part two deal with more specific questions. The problem of measuring aspects of cagnitive development is discussed by Calin Ellian, director of the lititish Intelligence Scole project, and perception and cognition are seen by George Butterwarth us func-tionally interdependent with cognitive structures originating in per-ceptual processes. In Hunter cun-siders the question, "What is memory development the development of?" with a series of particularly ingenious experiments, while the Graham gives a succinct account of purul development, in this section of in the first, it is the paper which extends Plage's ideas which is the most enlightening, namely the Newsons' argument that the child's knowledge has he route in early social interaction, pur technic with the mother. They contend that "... the child only achieves a fully orticulared knowledge of his world; in a cognitive lense, as his becomes lavolved in social trains at the child only achieves the comments of the content of the content of the content of the content of the country of the content of the conte ions with other communicating human beings".

Part three is devoted to educa-tional topics and covers scientific and muchematical taluking, addiescent thought, cognitive growth programmes and language programmes for disadvantaged children.

This volume includes extramely diverse viewpoints and tharefore lacks a cohorent fueus but it does being together a number of sically. Incoresting approsically. Inforesting approaches which exemplify a range of educa-tional questions affected by Pix

Probation's past

rt the many state welfare services which have expanded rapidly in the post-war period. Officially born in the 1907 Probation of Offeaders Act. hirthday. Piaget's main concern has in 1925, there were 4.00 full-time always been epistemological not predagogical, but these contributors demonstrate the estem to which his thinking hos influenced these.

Part one is predominantly theoretical. In it Eric Lanzer gives a balanced appreciation of Pinger's work, commenting that "to treatine whole of 'Piagetian theory' as if it were a repository of eternal wisdams is more of an insult than a tribute". An important point to which he draws attention is Piaget's "... remarkable flair for campathy, los ability to put himself into the shoes of the child, to think as the child would think—and then to turn round on that whought and onelyse its characteristics and mechanisms".

A most revealing paper is E.

Is than probation as a method of pennl trentment grow naturally on the legal and religious spheres in the late that the late of pennl trentment grow naturally on a receptive in this influence.

Another received "view of probation his received "view of probation his between the another tendency of the machinal probation as a method of pennl trentment grow naturally on and religious spheres in the legal and re

origins, particularly influenced by the existence of the missionaries, and it was passed through Parliament without any necessary expectation on the part of the Home Office and idenlogies in the service. Even the service, from the land of the part of the Home Office and idenlogies in the service. Even the service of the service is little discussion of changing techniques and idenlogies in the service. Even that missionaries would be ap-nointed as the new probation officers. Indeed, even after the pas-sage of the Art the chaleman of the prison commissioners was arguing forcefully that the new officers

Probation and After-Care; its Development in Engand and Wales by Dorothy Bochel Scattish Arademic Press, 17.50 SIIN 7011 2179 3 themselves, were appointed.

If, then, there is no "directly traceably connection" between the

legal and religious voluntary initi. tives of the nineteenth century and the entergence of the 1907 Acr. how hid that Act emerge? In terms of observable legislative and pre-legis-The received "official" view of mately this answer raises a number the origins of the service, characterized especially by Joan King's The Probation and After-Care Service is that probation as a method of receptive in this influence.

Peter Young, in a recem article which explicitly seeks the origins of probation in the octivities of the Church of England Teamerance Society, the hody which appained the first missionaries.

One of the great merits of Bochel's hook is thut she shows such histories to be fur mo simplistic. The 1907 Act was not, in his origins, particularly influenced by the existence of the missionaries, and it was passed through Parliament without any processory expectation. it the descriptive level, little use is made of the plentiful statistical material for the pust-war period, which could have enriched the work.

NATIONAL LIBRARY and Information **SERVICES**

A Handbook for Planners

C.V. Penna, D.J. Foskett and P.H. Sewell

The special value of the Handhook is that it sets out to do two things. Firstly to demonstrate to those responsible for national devalopment plans the kay role of library and ipformation services in national development; secondly to halp those rasponsible for formulating end implementing library and information sarvice development plans to understand how their activities can best conform to national needs.

The editors, assisted by the International institute for Educational Planning, have been able to do this by drawing on the experience of practitionars in a wide range of both devaloping and industrictised countries.

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1976 - 208 pages - 0 408 70818 2 - £8.00



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The basis of the new biology

The Life Science, Current ideas of Biology and J. S. Medewar Wildward Home, Left Science of Biology and J. S. Medeward Midward Home, Left Science of Biology and J. S. Medeward Midward Home, Left Science of Biology and J. S. Medeward Midward Home, Left Science of Biology and J. S. Medeward Midward Home, Left Science of Biology and J. S. Medeward Midward Home, Left Science of Biology and J. S. Medeward Midward Home, Left Science of Biology and Left Science of Left Science

Subsistence or rebellion

The Morel Economy of the Peasant by Jumes C. Scott Ynle University Press, £10.80 ISBN 0 300 01862 2

Moral Economy of the Peasant very of peasant rebellions. perplexed. On the one hand I um told that we must come to grips with the "phenomenalogy of exploitotion". On the other hand, I om presented with an analysis of the "etbic of subsistence" which seems to be present in almost all "traditiund agrarian societies ".

Rejecting what he culls objective fully curvinces us of the need to treat the position of the peasant is flare of the crop, since the former claims a fixed share of the peasant's product regordless of how much he from the point of view of the new product regordless of how much he peasant. But very quickly we are led not exploitative, is a better guarontee of minimum subsistence levels versol, to an analysis which would in bad years. scen to apply to African tribal seem to apply to African tribal systems, North American slavery, feudal Europe, and French and Irish peasant, not to mention the agrivensante, not to mention the agriventural producers of South-east years peasant anbistence was

reason it is very dilficult to know what to make of this contribution I came oway from reading The on the aims, followings and causes

The basic argument, upun which the political onslysis rests, is that peasant rebellions are ar least partly to be understood in torous of lacreased exploitation. Exploitation however, is to be understood not in obsolute terms, but rather in terms of the degree to which the exploited feels that minimal subsistence needs Rejecting what he culls objective approaches to the peasant economy, inevitability of economic and jones Scott orguns for a concern with "the major existential problems of peasant life". He successions of peasant life ". He successions of the content of the conte ontee of minimum subsistence levels

More generally, however, the subsistence ethic uppears in a wide variety of social and historical settings—in other pessant rebellions, in the norms of reciprocity which link pra-ducors and elites, and in forms of stratification, tenoncy and taxation in precapitalist ograrism societies.

All this is not to orgue that had Scott pitched the argument at a more modest level, the book would be of no use. Quite the contrary, the detailed discussions of porticulor rebellions with a good deal to our understanding of pensant politics. Becouse this analysis tackles the our-bresk of the rebellions, the prevail-lug economic conditions and the forms of economic organization as well, it goes farther than similar sitempts by others to account for poliprovides, fur example, an elfcctive counter to thoso who would argue that such rebellions were born of progress not exploitation, of hope rather than despuir. Scott's argument that taxation under such conditions is an explosive Issue connot.

be countered. Nowever to suggest that pessont

Asia and we soon find that peasant threatened by depression on the one tium of the subsistence of the subsis Indonesin ut the turn of the century, for example, while it may have served to mobilize pensants, simed not at preserving possant stass.

moterinlist, while rhose who have started with a more "objective" concept of exploitotion are inevitably led to consider the complexities of peasant political ideolugies.

Development's new orthodoxy

Why Poor People Stay Poor by Michael Lipion Maurice Temple Smith, £9.50 ISBN 0 85117 0765 Professor Lipton has written a long, influences, among which Lipton emphasizes Rienrdian, neo-classical

densely argued end vastly informed book on the thesis thet policies for the development of poor countries the rural poor stey poor despite His arguments ore bosed mainly on south Asien date but he offers them, and country somotimes oppears sometimes a little rashly, es gonerally valid in the Third World.

Bles in policy ie recognized by suffered by the conogyside in loss of equity eod efficiency. The equity loss depends on the essump-tions of diminishing marginal utility

duce both equity and efficiency.

These losses ere held not to be trensitory but to persist in the long run. The blas is held to be produced by the political power of urban interests end by intellectuel influences. The political power of the produced by the political power of urban interests end by intellectuel influences. The political power of the pholder.

pages later it is conceded that even tively low unly becouse of the price distortions impused by policy. But salvotion is now held to lie not in the price distortions impused by policy. But salvotion is now held to lie not in the price distortions impused by policy. But salvotion is now held to lie not in the price distortions impused by policy. But salvotion is now held to lie not in the price distortions impused by policy. But salvotion is now held to lie not in the price distortions impused by policy. But salvotion is now held to lie not in the price distortions impused by policy. But salvotion is now held to lie not in the price distortions impused by policy. But then it is apparent that this conflict, like many snother of the great social conflicts, exists in the eye of the produced by the political power of the price distortions impused by policy. But then it is apparent that this conflict.

Lipton distortions impused by policy. But then it is apparent that this conflict.

Lipton distortions impused by policy. But the price distortions impused by policy. But the price distortions impused by policy. But the price distortion is now held to lie not in the price distortion in the price distortion in the price distortion is now held to lie not in the price distortion in the pric In the 1950s Gunnsr Myrdal

srgued that market forces made rich areas richer and poor areas poorer by "circular cumulative and Marxist econonics and Imoginapoorer by "circular cumulative tive literature rather than (as might appear more abvlous) the developin ottroction to the richer ereas of the more mobile resources of the poorer and partly in trade—the ment economics of the 1950s and Lipton's categorization of town richer sreas exporting manufactures and the poorer primary products while the prices of primaries were falling relatively to manufactures. Selvation lay in policy interventions to suppress market forces. Lipton overdone. It leads to artificiol constructions such as the handleap having to spend more time prepar-ing intents food. It obliges Lipton accepts circular cumulative causa equity loss depends on the essumptions of illminishing marginal ntility and inter-porsonal comperability of utility; the efficiency loss on the organient that the productivity of capital is directly releved to the extent to which it is seturated with lebour. Text aysteme end price rigging that shift locomo and weelth from the poorest and most labour-laiensive ereas of economic lifo (le, small-scale farming) therefore reaccepts circular climulative causa-tion but argues that it is precisely policy that connects the prosperity of some areas (I o the towns) with the impoverishment of others (I o, the countryside). It is beceuse of "price twists" and other discrimin-atory interventions that cepital funds and humen skills are attracted

Policles, as Schumpeter political out, ero politics and it is no revelution that they serve the interests of the politically poworful—what else ere policles for? Linton argues that the powerful are not unmulithle, entirely self-centred or immume to sanslon. Su far as they can be nersualed to redocu urban blas (to his credit he about the recommend comcredir ho thes and recommend revi-lation) equity and efficiency must, occording in his arguments, ho in-creased. But though blus against the category he has distinguished may thus be comperacted, blas per so is thus be chimieracted, blas her so is inseparable from development policies and could nuly be diminished by means he would not countries ance: lessening the economic significance of political decisions. He is enulative that he does not want policy to become less important in dovelopment. Ills work is thus enlrely in harmony with preduminant dilnking on devolopment today end is a noteble contribution to whot might be called the new orthodoxy.

Douglas Rimmer

An exotic matrilineal society

The Nayare Today Cambridge University Press, £4.95 and £2.40 ISBN 0 521 21301 0 and 29091 0

tices immediately caught the attention of early European trevellers, who noted that in certain ereas of

graphic literature hes been genereted in debating these questions. However, even before modern social anthropologists had begun to do firsthaod fieldwork among the Nayare in this century, the "classic" Nayar system and its regional variants had lorgely disappeared to serve be interests of the student as much es the professional anthropologist; and for this reason many of the student as much es the professional anthropologist; and for this reason many of

thry, served os warrlors in the ermies of the could, rivalrous king-dome of the Malebar Coast.

Their kinship and merriage practices insmediately caught the attention of the mediately caught the attention of the mediate process in the county of the system equally the attention of the classic transaction of transac

The as assume the same of the student is a street of the student in the street of the student is the street of the student is of the student is of the student in the street of the student in the street of the student is of the student in the street of th

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On the awful discussion of the technical interval and desired in relative af Restoration staging in relative and the property of the historical and dramatic sources of Don Schustian, along Graba's

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On Schustian, almost Grahm's music for Albion, and a little more about the connexious of Dryden's almost the connexious of Dryden's Almohitegor in Molière's.

But the real test of a project like the California Presson in the connexions of Dryden's almost the connexions of Dryden's almo The Skalts hove had the black-

The Sknks hove had the black of the profits tradition which the Dutch had not at preserving peasant skews tence, but pt reinstating the tradition which the Dutch had not at preserving peasant skews tence, but pt reinstating the tradition which the Dutch had not at preserving peasant skews to the peasant denoted by the sking of the Donard Sking tence, but the profits the profits of the Indonesian economy, and the colony, it was the modernists, who added unit-cupitalism to this anti-imperialism to this anti-imperialism to this anti-imperialism to the anti-order of the Dutch had not been sking to the peasant denoted for the indonesian economy, and the conjunctive of the peasant denoted for the peasant sking the profits of the peasant sking the profits of the peasant sking the peasant sking the peasant sking the profits of the peasant sking the peasant sking the profits of the peasant sking the peasant sking the profits of the peasant sking the peasant sking the profits of the peasant sking the peasant sking the profits of the profits of the profits of the peasant sking the profits of the profits of the peasant sking the profits of system, arguing that technique change and the ponetrations

on an essentially beausy system, arguing that technical chonge and the ponetrational commercial economy in the first consideration of the particles in other particles in other particles in an expension of the particles in other particles and the comedy Augustin in our would the "internal enter two, the oneru Albiou and Albanius and the comedy Augustin promise in the cash of the particles in other two, the oneru Albiou and Albanius and the comedy Augustin promise in the cash of the particles in the particle edition. Por the only of the particle edition. Por the other two, the oneru Albiou and Albanius and the comedy Augustin particles in the particle edition. Por the other two, the oneru Albiou and the comedy Augustin particles in the particle edition, por the other two, the oneru Albiou and the comedy Augustin particles in the particle edition, por the other two, the oneru Albiou and the comedy Augustin particles in the particle edition, por the other two, the oneru Albiou and the comedy Augustin particles in the particle edition, por the other two, the oneru Albiou and the comedy Augustin particle In some vespects it certainly le

THE TIMES DIGHER EDUCATION SUPPLEMENT 6.5.77

Submerged by scholarship

Yot these three plays mark a crucial and difficult stage in Dryden's cyrlaing. Albion and Albinias appeared in 1685 ulmost by accident, strategy out of the product of the control of the

uppeared in 1685 ulmost by uccident, gruwing out of a prologue and turning into a fully-blown opera. Tho other two pluys were written very muck from necessity, after the loss of the Isurcateship 10, of all people, Shadwoll, in the alteroagh of the Revolution of 1688. But to some extent Dryden has lost teach with the stoge and now relies more leavily than ever on Thomas Bettertun. For Albion, Betterton the stoge and the scenery; as Dryden acknowledges in the preluce, "the descriptions of the Scenes, and other decorations of the Scenes, and other decorations of the Stage, I had from Mr Berterfon, who has apar'd neither for Industry, nor cost, to make this

In man-animal relations which the man-animal relations which the relative economic location of lunischolds, completed in adaption of the snowmout herding and the development of the snowmout the first of the snowmout the snowmout of the snowmout the snowmout of the snowm Uniscient narrators, omniscient novelists

pusturalism." The herding are considered by the sections are demandated by the section are demandated by Phillip Collius who were at a more advanted at their demandated by Phillip Collius who were at a more advanted at their demandated by Phillip Collius who were altertively dispossessed their holdings. Men in this case, the controls broke the related are concerned by the object of this series." It is the provide become dependent on essual and the come dependent on essual and welfore.

Ingold's outlysts indicate studies of individual wovels, plays and welfore.

Ingold's outlysts indicate studies of individual wovels, plays and welfore.

Ingold's outlysts indicate students." The little Arnold larly given the high rate of several students." The little Arnold larly given the high rate of several established, and these two the diminishing economic demographic viability at the demographic viability at the several carefully with number and munity, he omphasizes that the novel in question, and they torms of the development of the development of the first students. The necessory challenges of the book is the seven of the seven of the community seven proposed works of fiction; they shall be novel in question, and they common of the development of the seven of the novel in the recessory challenges of the book is the seven of the community with the necessory of the seven of the community seven of the seven of t

decision in particularly effervescent worlds. Angus Wilsun, for one, sees David Corperficht as Dickens's must "Victorism" movel, and Phillip Collins is able to "place" it in its ago by brielly developing critical empenrisons with fano Epre, Pendemis, The Mill on the Floss, and loter with Middlomorch (though he twice advances Mr Cusmbon to eductorate which Gaarge Kllet Inited to award him). As one would heve expected also dedicated a Dickension, Professor Collins presents a sympathetic oud considered reciding al the movel, viewing ir critically al the novel, viewing ir critically as o work of liction and as a tale which bears directly on the per-sonol bistory of the nuvelist.

Dryden agems more authoritatly and proscriptlye than ever; he in

30072

for too long, Betterion can the text, lorning it "judiciously" of 1,210

lopping it "indiciously" of 1,200 lines. In Amphitryon, he starred as

" miscient" nurrator, behind whom stands on amniscient navellst. At the stands on munisciont navellst. At the cut of his novel, however, Nick la deuled as upward-pointing domestic angel and continues to see his world through a glass, and darkly. John Whitloy socks to prove the universality of the greaness of The Great Gushp, while he points in its Americanness and its deliberme critique of an age which so spectacularly ol an age which so spectacularly combined the heroic with the vulgar, the make-believe with the money making. Though he tands too often to reler us to the weight of received opinion, Whitley 13:01s ship with the clusiveness of the novel, and with Fitzgerald's significant, but divided

For quick consultation

Who's Who in George Ellot by Phillis Hartnell tlamish Hamilton, £3.95 ISIN 0 241 89428 X

The Nuvels of Anthony Powell by James Tucker Macmillan, £5.95 ISBN 0-333-17261-2

cach oction of the drama. A play is now a grave and serious matter, whatever the linaucial pressures on writing, and Dryden carefully denies that the play "was huddled up in haste". For all its exuberance, even Amphitrmen treats the disguisings and mistakings as port of a difficult problem of identity in oneself when confronted by one's double.

Embatthed agoinst the world. Dryden neems more authoritative. Glenda f.coming'a; but rhis, ls mninly because abe quotes lier unthor more (George Ellot being far nny case books like these can be useful for quick reference, but not body is well advised to settle dumn

venia new systems and new rules for writing. It seems ineviable that Dryden should have been on the brink of abandoning the stage completely and remining to the sources of his work, to Virgil and to Changer to the Acade and the Chaucer, to the Acheid and the Fables. But, if we want to read those works in the Californio edition, we must still wait. Peter Holland ofton aufficiently like those in the movels for this omission to take away much in the helpfulness of the book. In both these works, improver, the omission of pluce-names (at least the houses, etc. where inojer characters live) is a substantial loss, and not bolateed out in my view by being able to trace the Garth's ent or Rulph Touchett's "rowdylsh, bristling, hustiling terrior". Often the houses and places con be tracked dawn indirectly; but quite missystematically. One finds that Mr Brooke lived at Tipton from the entry on Sir James Chelienham.

In the tho helpfulness of the book, and a cheop reprint of Florence comprehensively ennotated edition, nor a cheop reprint of Florence liarly's Life (largely autobiography by limedy limited) without its also essential (but where the cupyright problem is I suppose different). However, and one cannot litter that what looks like a circultons and Ill-plumned course has been authority that liardy himself deserves is, all lu all, still to seek. separate The Great Gatshy from David Connerfield, both nuvels have been taken as representative uccumus of lile in the decades which produced them, and hoth deal with the problems of responsibility and decision in particularly effervescent users in particularly effect of the tenatically. One finds that Mr Brooke lived at Tipton from the entry on Sir James Chelicalian, but (unturally enough) the entry

for Mr Brooke makes in mention of Sir Joines's Freshitt, which I have not yet ferresed and, in one respect, the James book is more authitous. It claims to indicate how the characters "relate to the author's themes" and so arranges to include a chief, discounts to include a chief, and include a chief, and a attempts to include a critical dimen sion; has such comments seem in fact to be brief and slight.

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Who's Who hooks for the weeks of numinar accelests ore num usually infled by academics; but there is a tendency for them to end numinary and the probably find thot thoy save us precious monacuts from time to time, and they ahould not, therefore, go unnodeod. Phillis Hurtholl's potted biographice are a good deal more reudable and entertaining that the marry into the mountain of the face of process of powers which was a significant to the first long, terse, lucilly of them; but the rest of us will probably find that thoy save us precious monacuts from time to time, and they ahould not, therefore, go unnodeod. Phillis Hurtholl's potted biographice are a good deal more reudable and entertaining that they several works that carry into the mountain of James Tucker's book is a general study of Powell's myels, and in-

Recently several works that quarry into die mountain of llordy's verse have been published; in 1974, T. R. M. Creightou's illosyncrotically erranged hut informative New Selection; two years later. New Selection of the selection of the selection of the selection of the selection. body is well advised to settle duwn ro rend them.

It is a pity, though, that Leeming has outleted all the Jomes stories, even substantial ones like The Lesson of the Master (this is included). Characters in the alort stories are often aufficiently like those in the tovels for this omission to take away much of the helpfulness of the hook.

John Holloway

Simple and subtle

Port-Royol by Henry de Montherlant by R. Gelfftha Blackwell, £3.00

unbeliever. This attitude is related to Montherlent's general scorn for the values of modam society and his advacacy of such "oristocratie" virtues as quality, pride, integrity, courage and wisdom. The strength of his sympathetic disbebet lies in the fact that it enables him to avoid religious didacticism while permitting him to explore spiritual experience with insight and tact. warks of fiction; they ucciner, rounded study in question, and thoy sonal interpretations at ment of the views of Given the necessory in their size and scope onks seem admirable, so for the alert student. So for the alert student seem of ment of the alert student. So for the alert student seem of the alert student. So for the alert student seem of the alert student. So for the alert student seem of the alert student. So for the alert student seem of the alert student. So for the alert student seem of the alert student seem of the alert student. So for the alert student seem of the alert student seem of the alert student. So for the alert student seem of the alert student seem of the alert student. So for the alert student seem of the alert student seem of the alert student. So for the alert student seem of the alert student seem of the alert student. So for the alert student seem of the alert student seem of the alert student. So for the alert student seem of the al

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Statistical Mechanics, Fluctuation and Noise by A. tt. S. tteck Edward Arnold, £12.50 and £7.50 tSBN 0 7131 3362 7 and 3363 5

Students of electrical engliseering and applied physics, especially those interested in electrunic flevices, fusion engineering and quantum nptics, are the target of this book. The first and third of these topics ora with us and it io to be hoped that the second will be, especially since the iden of fest breede reactors is becoming unpopular.

The subjects dealt with in this book are intellectually demanding mongh for most undergraduates although one point which larred was on read in the preface that: "it is much mure satisfactory to note that the subject has a firm oxiumate foundation, than merely to uppeal

A int of information is packed in.
The first chopier outlines probability theory, as a precursor to the subject of subjection mechanics. The subject of simistical mechanics. The second introduces the Maxwell distribution of velocities end clementary kinetic theory based on the mean free path pleture. Then the subject of statistical mechanics is otarted, mainly classical (Gibbs), although quantum mechanical ideas are inserted. The outhor wishes to blood classical analysis mechanics.

be nogntive (it is in the text of course).

Base Einstein statisties which are obsyced by photons and other particles of integral spin are introduced in the lifth chapter. It also emitains some elementary moder (and insert theory, since the Einstein coefficients used were derived from a study of thermal equilibrium. They are now applied to very nonequilibrium situations! Chapter six dools with finctions. The Weiner-Khinght theory is derived in an appendix, but its importance is discussed in the chapter. Kinetic theory reappears in a rother nuoro sophisticated form, Ie, Rohroman's equation, in chapter seven. A discussion of the vorious moments of the equation is largely relegated to another appendix.

dupendix.

Chopier eight deals with plooms kinetics, a subject which has been actively nursued in recent years become of the interest in fusion power. The table showing typical values of Debys length appears to be wrong, einco a laugth of 20cm is given for a glow diocharge. The radius of the discherge tube must considerably exceed the Debys length in order to obtelo e discharge plosms.

On the well known topic of "Lendau damping" of plesme wayes the surbor states that many ispers were published on the oubjeci, but seem rother oterile in retrospect. This is not entirely fuir; the nuther stotee that the contour interrogation is a sample forward, but the main question were which contour adould be used? It is which contour about be used? It is not even clear without further discussion why one adds a contribution of lift times a certoin residue. Why not 2i ii times? It is eleo very lateresting to note that the perturbation to the distribution continues to escillate after long times. tinues to oscillate after long times.

Electrical end optical noise are dault with in chapter nine. Johoooo noise end thermul noise are discussed but it is surprising to find noise in transistors not discussed at all. Noise in optical cyotemo is dealt with bacquasa these represent e growth point at prasent. The lust chepter discusses the raiolion between statistical mechanics and information theory. The author believes that the similarities are interesting and well worth understanding but probably not very deep. He is probably right, loformation problems can be fully discussed without invoking entropy.

J. E. Allen

Digital devices

Computing Systems Hardware by M. Wells Cambridge University Press £4.00 tSBN 0 521 29034 1

The number defines his intended The nutler defines his intended undience as students in the second year of a course which includes o substantial element of computer science. It should certainly serve admirably for its intended oudlence, though the buok should also be of wider interest and might well be useful for first-year students of computing otlence. The chaptere cover basic aspects of diglial systems; storage: input/putput devices: data torage; input/nutput devices; dato ransmission; processing; and sysems architecture.

The introductory chapter contains a good discussion of the principles of digital and madegue operations and of certain fundamental nations of hardware. However, a most surprising unission from a book of this certain is no mention wholso. sort is no mention wholsoever of software or even the word program. This is left to the final chapter and by inodequate even there. The chapter on storage is a good introduction to the basic mechmisms of the various sturage technlynes including semicanductor, core, whe and moving magnetic echniques. A summury helps in put this all lute perspective.

The chapter on Input/output attioning quantum mechanicul ideas are inscried. The ombor wishes to blend classicol and quantum mechanics. It might have been better to treat them separately, but one is not obliged to follow the historical order of development.

Chapter (our deale with the Fermi-Dirac distribution which is well known to all students of electrical engineering through its opplication to electrons in semi-conductors. This chapter will undustedly be much consulted by undergraduotes, it would have been useful, however, to give a dingram showing that the Fermi energy con be nogative (it is in the text of course).

Recollingly planting mechanical ideas to discusses a wide variety of devices such us teletypes, paper tupe reader and punch card resuler, printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the nit of early classifier and printers and graphics devices, with the vicing and printers and graphics devices such us teletypes, paper tupe reader and punch card resuler, printers and graphics devices, with the devices such us teletypes, paper tupe reader and punch card resuler, printers and graphics devices, with the vicing and printers and graphics devices such us teletypes, paper tupe reader and punch card resuler, printers and graphics devices and punch card resuler, printers and graphics devices and punch card resuler, printers and graphics devices discusses discusses in wide devices discusses a wide variety of

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review of the illiferent kindidity to into the longer and one ocumination city, the approaches and dicroprogramming.

This chapter would have been and dicroprogramming.

This chapter would have been the discussions of paging and mentation, for example, colding them on a given text, the discussions of paging and mentation, for example, colding them on a given text, they are many in existence; B. K. P

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Industrial the eoverage of material is mostly fairly conventional for a certain depth of according to the mostly fairly conventional for a mostly fairly conventional for a certain for a certain for a certain for a mostly fairly conventional for a certain for a certa

Undoubtedly the book will need to be supplemented by more detailed documentation on any detailed documentelian on any netual mocroprocessor to be used, but it forms on excellent bosis for neturing the structive and is structive and rendoulce tlespite being reproduced photographically from typescript.

Electronics

by K. J. Close and John Yarwood University Tutorial Press, £5.00 and £4.00

tSIIN 0 7231 0608 8 and 0732 7

tions, lifth edition by F. A. Benson Chapman and Itali, £3.95 15HN 0-412 14770 X

instead on the IBM system/360 bissembler. This is explained briefly, but a reader immorant of (any) assembly language may find it accessary to skip this chapter or follow the reference to another book.

Chapters three, four, five and six constitute the core of the book, describing several mneraprocessors. The onlipeus for exposition appear to have been chosen either becouse they are in fairly widespicad use, or because they represent important experimental developments in this field.

The two final chapters discuss inner oprocessors which are copolie of accopting the syntectic structure of accopting the syntesia and the acceptance of the department of physics at the Polytechnic of Central the Polytechni

phase control has become so wide-spread that ito coverage in non-specialist books is certainly appropriate. Whiling circults are dio-cussed and in particular those using the unifunction transistor. As elsewhere in the book the treatment tends townris the descriptive with un account on applications.

un account on applications.

One of the most striking (cames of worked examples. The treatment is usually non-mothematical (or easy reading but in other ways is quite comprehensive. In the opening chapter on the physics of semi-conductors there is, for example, a brief mention of unorphase semi-canductors, in the next chapter on semiconnincian illodes, the coverage includes variety illodes, the coverage includes the junction illode, the Zener diagle until the inner diagle. The chapters an field effect transistors and on the bipping the similant to design circuits. Device parameters are frequently quoted, parameters are (requestly quoted, but it is disappointing that the but it is disappointing that the likely spread of parameters is not. For example the pluch-off voltage and the drain carrent for zoro bloo oro shown to be vital for VET design but no mention is mode of their very wide variation, even for a particular device type. In this particular cose it would be helpful to describe how very easily these two parameters can in fact be measured experimentally.

Operational amplifiers waveform

measured experimentally.

Operational amplifiers, waveform generators and logic circuits form the subject motter of the next three chaptero. Useful madifications to standard circuits are included—the uso of Dorkington pairs in very low frequency multivibrators for exomple. However, analytical coverage is not os deep as in many text books, as shown in ovoiding o derivation of the vorious woveformed is a multivibrator. So for as mutariol not covered is concerned, the biggest disappointment is that there is nothing on digital circuits other than logic gates.

The volue to students of worked cxamples is unquestionable and the book by Close and Yerwood loss fine exemple of this philosophy. Very different, in that no text is provided, the latest collidon of Professor Beosou's book on Problems in Electronics with Solmious remains a useful eld to student learning. Consideroblo changes love leen mada in this edition, psrilcularly in the increased emphasia towards transistor circulis. Sections such as that on logic circuits moke the book seem much more in tuna with modern courses; it is disoppulnting only that the revision of this fifth edition had not gone even further in extending its coverage. It would be welcome to see more on digital systems and, although it might possibly be employed the stoppulation of the title, on control eldetronics. However the 545 probleois that ore included are instructive and this solutions are clearly presented. P. N. Denbigh

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Automatic control

Multivariable Control Theory hy J. M. Laylun Peter Peregrinus, £11.00 tSBN 0-901223-89-1

The availability of last, Hexible, cessurs in the form of digital computers has been a powerful stimulus them. The main source of new matic control techniques. This computer revulution has followed: matic control techniques. This computer revulution has influenced control system design in two ways. The computing capacity now ovallable is such that very complicated controller structures can be seen and existing textbunks, lies in the second part dealing with design. Since this is only some 78 pages long the amount of real navelty in the hunk is quite small.

The following design mechanisms. cuntroller structures can in principle he used, and thus the control system designer has to tackle the tems having many inputs and unt-puts). Computers con also be used as design tools; this is particularly the case when they are fitted with graphical autout devices and used in an interactive mode. Hence there has been a great deal of references there has been a great deal of references the second to the s

ple introduction to some uf these recent developments in multi-variable control theory which under-

show the neep and outmate relationship between these two opproaches. The material is organized but three purts, the lirst of which covers very wall known ground in giving a simple introduction to hasic system properties. This material is widely available and its inclusion in a brook.

A. G. J. Mackarlane

cult in justify. The remaining two parts deal with various bediniques of feedback controller design and with optimization theory, respecrively. These are again presented as quite separate blocks of annurial with little attempt to coordinate

of this short length is rather diffi-

The following design techniques ere covered: pole shitting, the community and dyndic transfer matrix system designer has to tackle the approaches, the inverse Nyquist problem of designing controllers for annihivariable systems (that is systems having many inputs and authors). Computers con also be used tools given of the bosic ideas, well

search netivity devoted to developing the theory of multivariable control in a form smitoble for use with computer-aided design methods.

Mr Layton's book, which is the first volume in the institution of Electrical Engineers' new Control Engineering Series, provides a simple logoduction to some of these to the multivariable case, and on the forging of clues and illuminating links between a variety of statevariable control theory which underlie the development of new control
design techniques. This whole field
is in a state of very ropid development, and it is passible that widelynceepted and definitive solutions to
the main design problems will
emerge in the near future. In the
mentione, those teaching postgraduant concess in outmantic control will welcome a cleor and simple
introduction to some of the moin
aspects of this difficult end important problem.

The text deels with system repre-The text deels will system representation (stote-space) and transfer function (stote-space) and transfer function (frequency-response) furon. It is multivariable control research, in the countries of the problem. token of recent developments which to purificular facets of the problem show the deep and outhoute relations of multivariable control.

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usual results no accepturs, including the introduction of non-deterministic computation. Findly they define grammurs, and related thom to the previous work on acceptors. The usual results on embiguity, derivation trees and the wwwy theorem appear.

The authors telle the trouble to link theory to both current practice (flow chorting) and to future mathodology, which is e step in the right discalar.

ment in programming. Here they develop the standard results and elso sirilke a blow for better programming. The third coepter reviews the various types of recursive functions vio the structure of flowcharts. They deduce the koy

results of structured programming from the theory of recursive func-thans. The fourth chapter covers cumputability.

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eddition to the besic properties of program scheolots, they emphasize proving programs, which is vital for theoretical machines and may become an accepted proctical technique.

In the second chapter they introduce more examples (Turing machines and vorious mechines with registers) they add the idea of one in the introduction in the programs where the introduction is the behaviour of enother and use it to demonstrate the introductions. Their style is good though fluency in ser theory is required in read the book. There are exercises (but not enough) without solutions.

Reviewers

J. E. Alleo is fellow of University Collego, Oxford;
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The University of Papun How Guinon requires en established Scholai to docupy the Chair of the Department of Political and Administrative Studies. The Superinant presently consists of consensor lecturer, and four lecturers. Courses are offered elait moderated leafs to the elait moderated leafs to the elait moderated leafs to the elait moderated leafs of Papus New Guinon and Indian Destina Economy on New States, Political Theory and Indian Italian, Political Economy on New States, Political Theory and Indian Italian Roleitous. In publical the Consensor in the Con

mont from mother University would also be walcomed.

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As well as leaching appropriate courses in his/ner liabilat, he/she would be expected, along with other monitors of shell to contribute to Foundation Yenr londership within the Dopartmond in promote hier-duce thirds studies. The Professor of Political Assemble appears to Political of Administrative Studies assemble appears to the negative end their training to become national recipies. The day-locked administration of the Department is in the need of a Chrisman elected by the monthers of the loavo

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Applications about include detailed curriculum viteo, a recontental photograph and the name photograph and the name and addresses of three releges. Conditions include provision of housing, annual leave lares, sludy loave and FSEU supersmeation. In some cases it may be possible to make an appointment on encondment. reconditions.

Firther details and list conditions of appointment are evalishin from the Secretary, 8ax 4820, University PD, Deseus News Guines, with whom applications elease on St. July, 1977. Applicants resident in UK should gend 1 copy of their applications of the UK should gend 1 copy of their applications. Intersity Council, 80/21 Tottonham Court Road, Losden WIP 907.

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Applications are invited for the following pools:—

(1) OIRECTOR IN THE INSTITUTE OF MASS COMMUNICATION. The Director should be competent to teach communitation theory end/or made production COMMON. Interest and becommunication in the application of problems would be destrable,

(2) BENIOR ACCOUNTANT/ ACCOUNTANT in the Burgary. Appending will be required to take up delifer as carty as possible and will be responsible for the continuous ravew of imancial records, expenditure control, jou costings, stock records, ordering procedure, inventories, and similar records and systems at the ternel object.

Detailed applications libred copied), including a curriculum, alreo and naming three retarees, ishosip be sent to the Recteliers. University of the West Incloss, kiono, kionston 7, Jemeice, W.I. The University will send terther potticulers to oil applicants and those may also be obtained from the Infor-University Council, 90, 91 Tollandem, Courl Read, London, WIP DOT.

NATIONAL UNIVERSITY OF LESOTHO alications are invited to (a) SENIOR LECTURESHIP

(b) LECTURERSHIP IN **PUBLIC ADMINISTRAION**

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Candidolor should wish to locach the theory and plaudice of Pichic Admitalinition, with special reference to developing condition. There is no opportunities for research, publications and consultancy. It is liciped that he opposition, who must have at least a Master's degree in this field, wild liftenly some practical experience in administration, will take untiliss post in August, 1871. The appointment will be on permanent and pendicuble terms or on contract for limited periods, normally top two to four years. In the first instence. Secondarion train another University would also be welcomed.

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SENIOR LECTURER/

LECTURER IN

STATISTICS DEPARTMENT

and CHAIR OF COMPARATIVE

LITERATURE Applications are invited for the glore-mentioned Chairs, both walnit the Department of Log John Studies and Comparative University

The Chair of English will be The Chair of English will become vacant on the Tead of Department. Professor A, W. T. Green, on M June, 1978. The succession candidate should have a strong academic background in English of the post will be to strongth in and develop the sole range of acidemic outcook with-in the Department

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Application must have a Mastera Gogree and prolorably operating and/or predictal statistics in a Cevaloping country. An interest in Comography and/or social research are holder of a country and interest in Comography and/or social research are holder of the post leaves. Appointed can else! work in Argust this year, when the present holder of the post leaves. Appointed will be an permanded in in the case of expetitives contract lating, nermally for two, four or else years.

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This eppoliphent, is commence, as soon as possible, will be made initially for one year but is ronewable ennustify for a further two years. The successful cardidate will toin the Astrophysics and Almosphorte Physics recearch group and will perticipate in programmes which include uitraviolal satronomical successful success or ta, eas per annum, with super-annuation.

Applications gleing full delaits of seademic record and expani-sions, end the names and addresses of two reteresa, should be sent to the Personnal Circler, The Queen's University of Selinsi, 80ffss. 877 1MH, before Stat May, 1977.

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PHYSICS

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SENIOR COUNSELLORS Applications are invited for a post of Soulor Counseller in mach of the following regions of the Open University:

vice, life suporvision mid fraining of part-line quoneoling stall stall file oversight of study oentrees in addition. Senior Coursellors will be involved in day and residential scienta. Appliancis stall be graduated with cacant experience from within the broad libid of odult, huther or higher odur-siter, They should be interested in the development and unalivels of surrors.

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The appointment may be made to retirement or ler o ehorter period, nermally for a minimum of three years; eatery at a point on the University's Locturer scale (3,333-50,655 per ahrum, Appointments to retirement include membership of the University's Euperanuation achome; for ehorier epochnimonia niteractive superanuation will be centile superanuation will be centile superanuation will be centile superanuation will be postored. Further perticulers and application forms are available, by postored request please, from the Personnel Manager (SC2). The Open University, p.O. Box 79, Westen Hall, Millon Keynes, MK7 GAL, or by talephone Iram Milton Keynes 63888. When applicate applicants should indicate to which of the two regions mentioned above they would with to be appointed, giving order of prelovence.

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Anplicellens are invited for a costdectorel Research Follow although the Copariment of Mellicensellens in the Copariment of Mellicensellens from candidates with suitable qualificialization of computers to prove ingebrate lopeleny or the application of computers to prove theory. The application is to a parted of up to two years and conditional conditions include a contribution lowered travel and removal expenses. Salery: \$419,850 per annum The appointment will commence as soon as possible in commence as soon as possible in contribution for the contribution of the contribution of the contribution of the contribution procedural tells of the lettowhip. Further Information, including details of the contribution procedural to available from the Replairar. Applications relating to Possition Number F81932 should be addressed to the Rogisters, University of Melbourne, Partiville, Vigicale, for applications is June 15, 1977.

2. PROPESSOR IN FINE ARTS applications in the Indian of Allications of All Illegory. Wast Midlende flagion with headquarists in Strateghern North Region with headqueriers in Newcestla Senior Couhealias an respon-elulo to their Regional Director for sepects of student services in the toglon including the develop-tion of student counselling ser-vica, the supervision and Indi-ting of pati-line gourselling shall and the averaged of student

Canborn. ACT 2600 Australia.

3. PROFESSOR IN RELICIOUS STUDIES specialising in Altican Holgrons, Comparative Religious Studios. and Harly of Christonity of Islan within Altico. Equilence ant/or liderest to analyting African harteling will be no edventaget.

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Research Assistants

Raquired for the start of the new session, Saplambur 1, 1977. City of London Polytechnic has vecancies for Research Assistants in the following areas:—
(1) MANAGEMENT SCIENCE

ha project is to invastigate the economic aspects of the ordering of morino treffic. Il is prepased to compare alternative regulatory tactors of saa transport. The parson appointed should have a degree or professional intradiction in stetistics end/or apprational research.

(2) PHYSICS

Two posts for projects on (a) electromagnetic properties ot particulais colleidal disparalens, (b) investigations on naw generation semiconductors.
(3) PSYCHOLOGY

The project is to work on the human mamory. Applicants should have a good honeurs dagres in paychology.

(4) GEOGRAPHY

(4) GEOGRAPHY
The project is to investigate the Middle Pleistocene deposits of Eastern Essex. Good honours degree in geography and a good grounding in the Qualemary history of the British tales are necessary.

(5) METALLURGY

Honours graduales in Metallurgy, or helders of en aquivalent qualification are required to carry out work on (e) the hydrogen stress cracking of elsels—a knowledge of electrochamistry would be an advantage, (b) an crack infilation of steels whon subjected to fetigue in a corrosive

(6) GEOLOGY Two posts. The projects being offered are: (e) geochemistry end petrogenasis at Scattish Tertiery compastie infrustione. (b) the geological structure end straitgrephy of the Caledonian Espidalan area. South-East Norwey, (c) Silica diagnesis in "cleen" quartz arenites.

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(7) BIOLOGY

Projects are in the following ereas: (s) genetice of antibiolic resistance in higher fungl, (b) equetic studies,

(i) distribution of benihic enimels and pollutante in the Madway estinary, (li) the rots of tungl in the decemposition of plant debrie in trash water; (c) physiclogy (i) study of bone metabolism. In vitra, or (ii) lubulin binding compounds and DNA synthesis in embryos, or (lii) hermones and accustic sensitivity in inaacle.

(9) CHEMISTRY

(9) CHEMISTRY Two posts are available in the following areae: (A) free redical reactions in the rollowing areae: (a) free radical reactions in the vapour phase, (b) development of novet anti-aptieptic drugs, (c) synthesis and evaluation of analgesics raised to ankaphalin, (d) fluorascence spectroscopy of biologically important tatra pyrrolea, (s) Nmr of liquid crystals, (t) Nmr studias of organmotallic compounds, (g) alactrochamistry and photochemistry all groups V mid VI confum salts and yildes, (9) ECONOMICS AND BANKING

Two posts are available in the following srees: (a) involving research into local merkete and their relationship to industrial structure in the urban area, (b) researching into the relationship between corporatta ownership and con-Irol In the United Kingdom.

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One poet involving rasearch into an appropriate sies of international business law.

Salary scale: \$2,244 in the tirst year staing to \$2,325 in the second year and to \$2,406 plus London Allowance of \$402 per annum, plus pay supplement.

Applicatione, specifying clearly which department and project you are interested in, and giving a full curriculum vitae and the names of two referees, should be made to Assistant Sacratory, City of London Polytechnic, 117/118 Houndadlich, London ECSA 78U, by May 23, 1977.

ULSTER COLLEGE THE NORTHERN

IRELAND POLYTECHNIC Faculty of Science

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Applicants should have a good Noseura Dagree and/or a pro-fessional qualification. The dulies of the post inside that organization and teaching of courses in the School of Computer Science; the exocessful candidate will also be enceuraged to participate in the development of research and postgraduals work. A packground in data processing and quantitative tech-niques in business, manegoment, and industried applications, logother with previous teaching expertance would, though sel exantial, be considered an advastage. The appointment will be made on an appropriate point or like Lecturer II acate according to qualifications and experience. Faculty of Technology

LECTURER II Concrete Technology

To lacture to degree and technicien engineer courses.

Applicants should be gradueten with appropriate professional 'inigresta in research end leberatory developments essential.

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The Establishment Officer, Uister College, The Northern Ireland Polytechnic, Jordanstown, Newtownsbboy, Co Anthring BT37 0QB.

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Palytechnies continued

Character and the Application of the Sales

Principal Lecturer in Sociology

Applicants should have a good honours degree in Seriology, and Apparants snould myor a good amount so rendemic barleship and substantial expurience of cause administration will be

expected.
The angeomial condidate should be able to assume the responsibilities of Course Tutor for the R.Sc. Socialogy Degree.

Temporary Lecturer Grade II in Sociology

The appointment is for one year from 1st September, 1977 in the Argust, 1979, Applicants should be oble to teach Sociology of Wolfare, Sociology of Medicine and Introductory Sociology to B.St. Honours Sociology Students. A good honours degree in Sociology is expected, with preferably a higher degree.

Faculty of Economic and Administrative Studies:

Schior Lecturer in Business Policy

Applicants should be able to touch this iness Policy, and Management Theory on Degree, DM S and specialised short courses. The post will involve some day, evening and occasional weekend teaching and course organisms. Applicants must have a suitable degree or professional quality atom and have a management of the years' management experience.

Lecturer Grade II in Accounting and Business Finance

To teach accounting subjects at INN) and degree level, with an emphasis on tho application of theory and techniques. Believel teaching and industrial/commercial experience (a desirable. Applicants must invocacounised professional qualifications and will normally be expected to have a degree in a linioness Studies subject.

Lecturer Grade II in Business Operations (Purchasing and Supply)

Will share responsibility for the Purchasing and Supply option on HND and HND (Endorsoment) courses. This may include World Resources and Trade, Slores and laveragery Control and Purchasing, Relevant teaching and industrial experience is desirable. Applicants must have a degree in Business Studies or Economies.

Salary Scales: (inclusive of fonden Allowance) Principal Lecturer 26654-27350 (Bart 18202) Senior Lecturer #5746-£6660 (Har) \$7101

#3998-4:6207

Definer II.

Sinff of the inp of the Lecturer Grade II scale cut expect progression to the Senior Lecturer Scale subject to antisfying an efficiency requirement.)

Application forms and further particularly (Please state past in which interested) can be obtained from lectularisment Differently, The Polytoninio of North Lundon, Holloway Road, N78DB, Closing dote for opplications: 23rd May, 1977.

THE POLYTECHNIC HUDDERSFIELD

Department of Computer Bludles and Mathamalics.

LECTURER II OF SENIOR LECTURER

Computing ACA/129

Candidates should possess a good Henours Outroo in Computer Science and/or MOCF, together with expenience in one of the following stone: data bear systems, computer estudity and sudit, programming (systems or application), information systems design. Depres context in DA (Honsi, OA computing in business that of the processing bear applicable) by ChAA to each in September 1977. Statlelica

Constitute should possess a good Henours Cogres in Siduatics. Appropriate industrial/business experience in Operational Research would be an advantage.

School of Architecture

LECTURER II or BENIOR LECTURER IN ARCHITECTURE ACA/121
Canodidates should be well qualified architecte with a special interest.

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to the social content. There entry to coportunities for Dopley teaching in the studios slap. Department of Catering Studies

LECTURER II Hotal Celering Administration

ACA/132 Conditates should be qualified to teach Hotel and Cataling Administration to statement taking degrees in Cataline Studies and in Hotel and Cataline Administration and cataline Administration and cataline Administration. Applicants should preferably be guidated with Industrial capacitons and with specialist knowledge of the briganizational and concat eagure of Hotel and Cataline Administration.

Food Studies : ACA/133 Candidates should prelatebly be graduated with hidustilal experience ideally in both the welfare and commercial raction of the head and catering tridustry. The processul anniform will be expected to teach both theoretical and practical espected following the Department offers—o 85c in Catering Studies, GA in Hotel and Catering Administration and are HNO in Hotel and Catering Administration.

Borary : 81, 28, 931-25, 935 | Borj —£8,417 L || 18,278-25,493 plus 1312 supplement

Stof are expected to undertake octivities, including recently, in public to loaching dulles. Frith's dele's and application forms, which should be rejurned by 50 May, 1977, from the Eslabijahmeni Clies. The Polytechnic, Overnagate, Hudderstath Hp1 30H. (Tel: 0186-22298—Ext. 2228.) A CONTRACTOR OF THE PARTY AND ADDRESS OF THE P Faculty of Human Sciences-Livingsiona House

Doportinant of Health and Social Studies Lecturer II/Senior Lecturer

in Social Work Applicants are lighted to join the found of social work shall feaching the two-year COSO course and the social work opinion of the reaction. CNAA BA Bons Sociology Coulon Applicants must be professionally qualified and should have a relevant degree. Feaching experience would be an individually tales and degree.

Lecturer II/Senior Lecturer in Nursing Studies

Applicants should have a depren and he probableading qualitied. The fections will be responsible for the countington of the feature will be responsible for the counting of the feature of

Lacture: II—£3.279.£5 493 Senior Lectura:—£5,031.£5,417 (Plus appropriate Government Supplement of up to a magazulu of \$192 and applicable London Affowanco.)

Foother details and application from from 1— Scaler Stalling Officer [7] Reith East London Polytochaic, Forcet Rund, London E17 4JB, Telephone: 01-627 2272, Exten-ates 20. Closing dals : 25 May, 1877

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THE REPORT OF THE PROPERTY OF rimani of Managomani in the Public Services Principal Lecturer in Management

to coordinate the development of the Higher Ephentian Manager and Lask group. The activities of which encourages British universities continued and development administration programment. European programment for developing countries and in-institution development projects.

Condidates should preferably have blobar developments.

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Conditates should protorobly have higher degree in economica, or thuncing or ecoouting or quantity two mothods; experience in management development programmes; willinguers and relevant experience to be able to prodorate foldows in the SALARY SCALE: Principal Locturer \$5,840-27,578 Plus £312 Government Supplement

Candidates ore welcome to discuss the past informally with John Davice, Head of Department at Denthusy Pack (024-64) 2141)

Senior Lecturer In Financial

Majingement/Management Accounting

'Applie allow are thether train' enademically/protessionally qualified pursues to look linearing enagement Accounting without without without without without without the pursues. Those include the proposition in Management Studies (Manufacturing Management). Olidens in Management Studies (Manufacturing Management) and loo special about courses for soniar and middle management The musicouslul auditation will be expected to useful in case study development and course administration.

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Anglian Regional Management Centre

IONTH EAST LONGON POLYTECHING - BASEX COUNTY COUNCIL

NEWCASTLE UPON TYNE POLYTECHNIC DIRECTOR

Applications eta invited for this goal which will become vecant on Septamber 1, 1977, on the retirement of the

Salary: \$13,558 (including \$180 appplement)
Application forms, refurnable by May 27, and further particulate are obtoinoble from the Chief Administrative Officor, Newcselle upon Tyna Polylachnic, Ellison Building, Ellison Place, Newcasila upon Tyna NE1 8ST.

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Applications are avited for the block created push dutation below.

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Safary scale: \$3,003 to \$6,007 gross luctualize plus 1977 Duration award.

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NAPIER COLLEGE OF COMMERCE AND TECHNOLOGY.

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Colleges and Institutes of Technology continued



SRC and other Research Studentships evallable in the Schools of Electronic and Electrical Engineering and of Mechanical and Ollahore Engineering.

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Applications are invited for a limited number of Social Science Research Council Studentships tenable in the School of Education from October 1977, Studentships ships, swerded for Iwo years with the possibility of extension to a littre year, cover meintanence (basic rate £1,270 par annum) and academic fees.

Applicania must register for a research degree end hold a first or upper accond cless honours degree or e maters degree of a British University. Those gredueling in the summer of 1977.

Further perliouters from: Proleseor Devid Leylon, School of Educellon, University of Leede, Leeds LS2 9JT.

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Colleges of Higher Education

Christ Church College Canterbury

applications are invited for the following posts:

1) Lecturer in Education

to be responsible for the development of endio-visual resources. The facilities include a well equipped T.V. Studio and specialist Resource Centres. Camildates must also be able to contribute to professional courses for the B.Ed., degree, the Postgraduate Certificate in Education and courses for serving leachers.

2) Lecturer in Education

Mits particular reference to Science or Mathematical Education to be responsible for the Education units of the M.Sc. degree in Education and Physics which is direct joinity by the College and the University of tent. Candidates must be highly quelified in Education and in Science or Methematics, and be also able to tenthalout to the Education course or to the professional tenthaloute or Mathematics, for the B.Ed. degree. It styling leachers.

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SOUTHAMPTON LA SAINTE UNION COLLEGE OF HIGHER EDUCATION

LECTURER II IN THEOLOGY AND RELIGION

Esplember 1877 a Theology Oradusts with a special in biblical studies. To share in course planning and the port in the Department of Theology and Heligien. ellons by tollor, with juil curriculum vitee and the sames of College should be made by 13 May to the Principal, Le Galete legs of Higher Education, The Asams, Southweste

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Education :

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TRINITY AND ALL SAINTS'

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Trigity and All Saims! Colleges, affiliated with the University of Leeds, form an independent institution providing studies fealing to BA (Collegiate), BSc (Collegiate) and BEd Degrees of the University of temberate and Bea regrees in the conversity in Leeds. Candidates appointed to the teaching posts described below will be expected initially to teach to homours degree level but should have an interest in nare advanced work.

Each degree combines a selected Major Academic area of Study with a Professional Study chosen frum the three available fields :

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Cexeminious have been negotiated from relevant rufessional examinations). For careers in Teaching and nther Educational Services. For careers in auch areas as Accountancy, Banking, Insurance, Local Government and Management (with exemptions from mony relevant professional examinotions).

Applications are invited for the following posts: School of Education

(1) Lecturer/Senior Lecturer with responsibility for the organization of In-Service Education for Teachers.

School of Management Sciences (2) Lecturer/Sculor Lecturer in Monagement Studies.
(3) Lecturer/Sculor Lecturer in Business Studies. School of Communication

(4) Lecturer/Senior Lecturer In Organizational Communication.
(5) Lecturer/Senior Lecturer in Communication

Research or PR thenry and practice. (6) Lecturer/Senior Lecturer in Communication Practices.

Division of History, English, Drento

(7) Lecturer/Senior Lecturer in History with special interests in Local History and Modern British His Division of Mothematics and Science

(8) Lecturer/Seuler Lecturer in Biological Sciences. Candidates interested in the School of Communication may apply for more than one of the three pasts. Preference will be given to those with relevant professional experience in, eg. public relations.

SALARY SCALES within the range ; Lecturer II : £3,591 to £5,805 Senior Lecturer : £5,343 to £6,727

With an addition of up to £180 front April, 1977. Purifier particulars and application forms, which should be returned not later than Wellnesday, May 18, 1977, are obtainable from:

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OF HIGHER EDUCATION

Temporary Part-time

Lecturer in Mathematics

Applications are invited for a half-time post to teach

MATHEMATICS et this College. The appointment will be lor e period of one year beginning in September, 1977.

Lecturer/Senior Lecturer

in History

Applicatione ere invited for the post of Lecturer/Senior Lecturer in HISTORY at this Oction (extern no porting to experience). Applicante should be able to differ some of the tollowing: medievel history [Brillsh and European); an interest in local history rechasology; e will-proceed to help with proceedings.

Further particulers may be obtained from the Principal, Chester Collega, Cheyney Road, Chester CH1 48J, to whom applications should be sent by Mey 14, 1977.

LANCASUIRE

EDGE HILL COLLEGE OF

noquired tor 1st Soptember, for one year Lecturer [1] of Contribute or 1.4. and C. Ed. Courses. A specialist inforcet in the courses. A specialist inforcet in the course of the courses. A specialist inforcet in the course of t

TEMPORANY LECTURES!

Colleges of Art

GLOUCESTERSHIRE

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OF ART AND DESIGN
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The Registrer (Applications),
Trinity and All Salms' Cotleges,
Brownberrio Lone, Brownberrio Lone, Horsforth, Leeds LS18 5HD.



PRINCIPAL The post will become vacant on 1 September. 1977, on the refirement of Mr T. Williams.

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SCOTTISH COLLEGE OF TEXTILES

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The College is a Scottish Central Institution

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full-lime post-graduete, degree-level end higher

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The person appointed should have appropriate

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The ealery (at present under review in the light

Further particulars and application form obtain-

able from the Principal, Scottish College of Tex-

tiles, Galashiels, Selkirkshire, to whom com-

pleted forms should be returned by Monday,

CONTRACTOR CONTRACTOR

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The first of the section of the sect

Colleges of Further Education

of the Houghton Committee Report) is £8,325.

sional business sludies disciplines.

May 16, 1977.

Colleges of Higher Education continued

This is a Group 5 college and salary will be in the range £9,459-£9,969 per annum. Further perticulars and application torms are available (on receipt of a siamped addressed toolscap envelope) from the Chief Olificer, Wastern Education and Library Board, Headquarters Offices, I Heaplied Roed,

Closing date for the receipt of applications: Mondey, 23 May, 1877.

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The Notional Association of Teachers in Further and Higher Education is in dispute with the Liverpool Education Authority over conditions of service in further education establishments.

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Salary: In accordence with Burnhum F.E. award for a Group 6 Collage, viz. £8,586 per annum.

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As an haperton of Tixes you will need to have your was about you, especially when as potabling with is its detarming the tast hability of both formula sig-and individuals which demands full trace of the intensive training you reserve action as I

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20.530 By 40 you could be in a post with the Tax inspectionals or in general monocoment in the Civil Service, taking you to y 11,000. There are vacancies ill over the country. Admics ligher

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Applicants must have a good degree in English. They should also have at least two years experience of teaching in the U.K. at postsecondary level, or alternatively, of teaching English laoguage and literature overseas for a similar period, or have relevant experience in publishing.

The post is based in Oxford, in OUP's Academic Division, and earries a pensionable salary of £3367 to £5031, according to qualifications and

Applications to L. R. Swanzy, Personnel Department, Oxford University Press, Walton Street, Oxford OX2 6DP by 21 May 1977.

Centre for Studies in Social Policy

DIRECTOR

which will become vacaul in Soprember on the appointment of Mr. A. R. Isserils to a post in the Office of the Periamentary Commissioner for Administration. Salary, etc., according to qualifications and exportence, but C10,000 or more pips contribution to poststo provision. Applications last copies) should be sent to trace the Chairman of Cousell, Mr. C. F. Caster, at 82 Coughly Street, Landon WCIM 24.6, not later than 11 June, and lurther portleuters may be obtained from the Sursor at the some address.

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Would oul returned value-lears or persons with experience and knowledge of taxelephing countries. Finent franch required for Comore Volentooc forme include byleg ellowings, housing and maumice. Vehicle provided and all expenses puld. Details and application form from : John Tollord, I.V.S. Recibe L. Cyresole House, 13, Ropeni, Road, Lelcoster III.

Closing data for applica-Write Section AA for detella Administration



Applications are invited for the post of ADMINISTRATIVE ASSISTANT (Grade AP4)

In the Bursar's Office. The appointment provides an In the Bursar's Office. The appointment provides an appointment provides an appointment provides an appointment provides an appointment of the entire action of the entire action of the entire action of the entire action. Candidates preferably but not necessary having previous experience in the entire action personnel management should write to the Personnel Officer, College at Ripon and York St Jahn, Loid Mayor's Welk YO3 7EX, from whom further particulars and application for the entire can be obtained. and epplication larms can be oblemed.

Overseas

The British Council

TECHNICAL EDUCATION

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The Brilish Council has declied in add in the stall distillers in Animan and in Culto a specialist gog to exhibit for these two posts will include the acquidite all thorough knowledge of technical, vocational and indestiguation in the country concerned and the dissense of internation about licitish developments in these beather and not the licitish developments in these beather management of the Council's existing projects in the subjects and the blentification and development of to opportunities for collaboration with Britain. We expend prosts to offer great job satisfaction in a great on the current of the authority which they will undestablements.

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The salary scale is 15,678 to 16,678 and previous ones allowed the littlish containing matter or family allowances from the provised and on the plantage of technical training projects of season and on the plantage of technical training projects of season and on the plantage of technical training for the Amage 20 called pasts.

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Selection will be by London interviews and heard.

Write or telephone, quantum Ct.t, for further details and a application form to be returned by May 311, to 3.0 application form to be returned by May 311, to 3.0 application Department, The British Canacil, 65 Data Street, London WIY ZAA, telephone 01-492 8011, excessor, 3041.

The British Council

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